DOCUMENT RESUME

ED 100 809	SP 008 713
TITLE	The Teacher and Educational Change: Volume 2. Recent Trends in Teacher Recruitment.
INSTITUTION	Organisation for Economic Cooperation and Development, Paris (France).
PUB DATE	74
NOTE	212p.; For related document, see SP 008 712
AVAILABLE FROM	OECD Publications Center, Suite 1207, 1750 Pennsylvania Avenue, N.W., Washington, D.C. 20006 ($5.50)
EDRS PRICE	MF-$0.75 HC-$10.20 PLUS POSTAGE
DESCRIPTORS	Educational Change; *Educational Trends; National Surveys; Primary Education; Secondary Education; *Statistical Analysis; Statistical Data; *Teacher Education; Teachers

ABSTRACT

This two-part report is based on the official published resources received by the Secretariat of the Organisation for Economic Co-operation and Development. Part 1 consists of two chapters. Chapter 1 deals with the qualitative aspects and the changes in teacher training and retraining at the primary and secondary levels introduced in the various countries since 1968. Chapter 2 deals with the quantitative aspect and provides a tentative analysis of the statistics collected since 1965. This analysis compares recent trends in the increase in pupils and teachers, the percentage of women teachers, and the percentage of qualified teachers for primary, general secondary, and technical secondary education, respectively. Twelve tables and a bibliography are included in this section. Part 2 contains a series of tables of statistical data according to country. Series 1 presents data concerning pupils and full-time teachers in primary education, public and private; series 2 presents information concerning pupils and full-time teachers in general secondary education, public and private; and series 3 presents information concerning pupils and teachers (full- and part-time) in technical secondary education, public and private. (PD)

ED 100809

THE TEACHER AND EDUCATIONAL CHANGE

VOLUME II

RECENT TRENDS IN TEACHER RECRUITMENT

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PREFACE

For some years the OECD has been concerned with future policies for the teaching profession, the teacher being considered as the key factor in the qualitative and quantitative development of educational systems.

Previous OECD studies related mainly to the imbalance between supply and demand which was characteristic of the 'fifties and 'sixties and to the policies which Member countries adopted to resolve this problem.

The conclusions of the report Training, Recruitment and Utilization of Teachers in Primary and Secondary Education (OECD, 1971), which was based on a series of country surveys also published by the Organisation, stressed the need for a closer link between qualitative and quantitative aspects in any analysis of the recruitment and utilisation of teachers. Now that the recruiting of sufficient numbers of teachers is no longer a serious problem in many Member countries, the OECD has shifted the emphasis of its work towards an analysis of some of the key problems relating to the quality of the teaching body. The Organisation has in particular carried out studies into teachers' reactions to innovation and changes in teacher roles (1). In this connection, it proved necessary to also consider recent developments in the initial and further training of teachers and in teacher/pupil ratios in primary and secondary schools in Member countries.

To some extent the analysis of these developments in the present publication is an attempt to up-date the 1971 study Training, Recruitment and Utilization of Teachers in Primary and Secondary Education and its supporting statistical data. It is in fact a consolidated survey with statistical tables for each country which have been standardised, as far as possible on the

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1) See the Volume I, The Teacher and Educational Change: A New Role, OECD, Paris, 1974.

basis of the Classification of Educational Systems published by the OECD. This collection of statistics shows how far the majority of Member countries still have to go in gathering and compiling statistical series useful for the elaboration of a coherent recruitment planning policy and for meaningful comparisons on an international basis.

This Report, published under the responsibility of the Secretary-General, was prepared under the Education Committee programme by Hélène Bureau, Consultant to the Directorate for Scientific Affairs.

Part One

STUDY OF SYNTHESIS

FOREWORD

This report has been based exclusively on the documentation available in the OECD Secretariat, viz., the documents, studies and official statistics received regularly. The previous OECD study (1), which will be mentioned several times in the text, was written largely with the help of national case-studies (see bibliography) and it was, therefore, possible to make a fairly detailed analysis. It is not so in this case, since the documentation, being limited to the official published sources received, is much less plentiful for each country concerned; this greatly reduces the value of any general analysis at international level.

The first part of this report consists of two chapters. The first chapter deals with the qualitative aspect and the changes or reforms in teacher training and retraining at primary and secondary levels introduced in the various countries since 1968, the date at which the previous study was completed.

The second chapter deals with the quantitative aspect and provides a tentative analysis of the statistics collected since 1965 for the countries as a whole. For primary, general secondary and technical secondary education, respectively, an attempt has been made to establish a country and inter-country analysis of recent trends in :

- the comparative increase in pupils and teachers;
- the percentage of women teachers;
- the percentage of qualified teachers.

The analysis, which is already limited by the summary nature of the available statistics, is restricted still further because of their non-comparability.

The statistical commentary was prepared from the basic tables for each country reproduced in Part Two of the report.

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1) Training, Recruitment and Utilization of Teachers in Primary and Secondary Education, OECD, Paris, 1971.

I

QUALITATIVE ASPECT

Part Three of Training, Recruitment and Utilization of Teachers in Primary and Secondary Education (OECD, Paris, 1971) deals with the qualitative problems connected with teacher recruitment conditions. The teacher "training-recruitment-utilisation" relationship is fundamental and complex. In order to obtain an initial idea of the situation, a quantitative and qualitative approach is necessary, although the statistical material is obviously inadequate and in most cases does not give any insight into interrelationships at national level.

The first chapter comprises three sections:

1. Initial training: reference is made to decisions concerning a particular level or type of education (primary, general secondary or technical secondary) and more general information is given on the length of training, its content and relevant research activities;
2. Further training of teachers an attempt is made to describe the present characteristics of retraining (frequency, methods, duration and content and the more or less compulsory or even lifelong nature of the activity);
3. The implications of the development of educational technology for teacher training and retraining are discussed from the standpoint of the methods used and the actual content of training.

The information on national policy, given as an example, is reported briefly, and the works and periodicals listed in the bibliography can be consulted for further details. As in the quantitative part of the report (which suffers even more from the inadequacy of available data) only documentation in the possession of the OECD Secretariat was used. The data collected are therefore incomplete.

There can be no question here of making an exhaustive list of all the decisions taken by governments in the last few years; the aim is rather to pick out the new features of some of them in order to throw light on the kind of problems which form the background to present trends.

A. INITIAL TRAINING OF TEACHERS

Over the last ten years or so, the responsible authorities in the different countries have been seriously concerned with the level and content of teacher training in primary and secondary education. In addition to the educational reforms designed to transform the educational objectives, the organisation of school work and the role of the teacher, almost all OECD countries have made some changes in their systems of training teachers. These reforms began about 1965 and the work has been going on ever since. Part Three of the publication, Training, Recruitment and Utilization of Teachers in Primary and Secondary Education (1) describes the change in teacher training standards. The substance of that document will not be repeated here, and we shall merely mention any new facts recorded since 1968.

There can be no question of establishing general trends since the period is too short, although some convergences can be discerned in a large number of countries. Instead, an attempt will be made to describe the kind of problems which the various countries have tried to solve by decisions taken in the last three years. Some of these problems refer specifically to a particular level or type of education (primary, general secondary or technical secondary); but the movement to adjust the training of teachers to the level in which they are to teach has already made great progress and has even ceased to be topical. Attention is now focused on more general issues.

1. Decisions specific to certain levels or types of education

The fairly general extension of the period of compulsory schooling tends to iron out the specific characteristics of each level or type of education. However, when the distinction is

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1) OECD, Paris, 1971.

maintained, which is almost always the case, some decisions refer specifically to primary, general secondary or technical secondary education.

a) Primary education

The specific problem of "normal" education (education given in teacher training colleges and similar institutions) is its position in relation to university education.

Even in 1965 many OECD countries were turning towards university training (1) and more recently, other countries have followed this line. For instance,

- In Finland under the 1970 reforms, primary school teachers must be trained in institutions which form an integral part of the university.
- Similarly, in Ireland since 1970, teachers must hold the Bachelor of Education degree (2).
- In Canada, in cases where training colleges are still independent, there is a movement towards integration into the university.
- Elsewhere, independent training colleges are strengthening their ties with the university; this is the case in France where certain courses (mathematics and linguistics) are given to an increasing extent by university lecturers.

Whatever the system used, therefore, primary school teachers are increasingly university-trained. This will probably be the rule almost everywhere in the future and is a factor leading to the unification of the primary and secondary teaching force.

b) General secondary education

Here, the main factor is the growing importance attached to pedagogical training. Secondary school teachers are traditionally university graduates and receive no real pedagogical training. This situation has been changing since 1965 to meet the new problems of mass secondary education.

- In England and Wales as from the beginning of the 1974 school year (3) university graduates with no pedagogical

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1) Op. cit., Part Three, Chapter II.

2) This decision which for some time remained in abeyance raises the total period of training from two to three years.

3) A similar system has been operative in primary education since 1970.

training will no longer be permitted to teach; in 1969 compulsory training courses were introduced for new entrants to the profession.

- In Northern Ireland since 1968 teachers wishing to be "registered" (1) must hold a university degree and a certificate of advanced studies in education.
- In Sweden gymnasium teachers have to complete four years at the university and one year in a teacher-training college.
- In France since 1970, a one-year teacher-training period has been established for "Agrégés" (2).
- In Luxembourg the reform of the training period for secondary teachers was decided en 1970.
- Finally, in Germany the 1970 reform intensified pedagogical studies during the initial stage of training (before the probationary period).

c) Technical secondary education

During the last few years, in some countries more attention has been given than formerly to the training of technical teachers (3); there is a tendency to raise training at least to the level of that of teachers in middle schools (first cycle secondary).

- This has been the case in Yugoslavia since 1968-69 and in France where more systematic vocational training (4) has been established in the "Ecoles normales nationales d'apprentissage" (ENNA).
- In Sweden, from 1972, teachers in vocational education will be trained in the same institutes as middle school teachers.
- In Austria, since 1971, teachers in technical education receive training equivalent to that provided in the teacher-training colleges (two years after the Baccalaureat).

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1) Established.

2) It includes four to five hours per week of teaching practice.

3) The specific problems of technical education and the complexity of the teaching body have led to a slowing down in the reform movement.

4) The training period has been increased from one to two years.

- Finally, in the Netherlands, the new system will come into force as from August 1972 (1).

These measures are the outcome of the efforts of various countries to integrate more closely technical and general secondary education.

d. Training for supervisory staff in primary schools

This new departure (2) in Japan and Yugoslavia should become more general in the future. Most countries are trying to introduce a system of educational reform and continual innovation. Among other factors, principals and supervisory staff can play an important part in spreading these reforms.

- Accordingly, an advanced course was established in Tokyo and Osaka in 1967-68 to train research workers, specialists in the various types of education covered by compulsory schooling, and principals of primary schools.
- In Yugoslavia, separate courses in education were established after 1968 in the Faculties of Arts: they were intended for training college graduates wishing to be teachers, principals or educational counsellors in primary schools.

2. Problems common to the different courses

In addition to the specific measures for certain types and levels of education, there are other measures of more general scope: extension of the teacher-training period, changes in the content of this training (balancing the theoretical and pedagogical aspects), development of research activities in the training institutes and measures tending towards greater professionalisation of teaching.

a) Tendency to prolong the training period

This tendency is already old ; it appeared in 1965 in many countries and concerns both primary and secondary teachers (see OECD publication referred to above, Part III, Diagrams 2

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1) This very comprehensive training is given to teachers with four years' professional experience and consists of a basic course (two years), a supplementary course (two years) coupled with two periods of practical experience (one year each) and a probationary period.

2) Access to such posts was traditionally based on seniority.

and 3 Chapter III). It has not, however, increased more quickly in the meantime.

- Nevertheless, the Netherlands and Sweden have prolonged the training period for primary teachers by one year, making three years in all.
- As from 1972, the same will apply in Ireland.
- The new teacher-training system (three years) will become general in Finland between 1972 and 1975.
- In Turkey, as from 1966-67 the two-years course in the teacher-training institutes (training teachers for the first cycle of secondary education) was extended to three years.
- In addition, in Canada and the United States there was a fairly general tendency to prolong the duration of training at all levels.
- In the United States the Master's degree (four years at university) is required more and more for teaching in secondary education.
- The same holds for Northern Ireland since 1970.

b) Changes in the content of training

The decisions taken by some countries are designed to meet several types of problems:

To increase the competence of future teachers by means of more specialised academic studies:

- In 1968-69 several sections were established in the training college in Belgium.
- In the United States certain subjects such as mathematics have an increasingly important place in the teacher-training curriculum at all levels.
- In Germany the new training for secondary teachers introduced in 1970 provides for more scientific and more specialised instruction in the initial phase (detailed study of a particular subject).

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1) Two facts should be noted as regards the diagrams:

In France, the second cycle classes (preparing for the Baccalauréat) in the training colleges are gradually being phased out.

In Italy and Turkey, no decision has yet been taken on plans for reform.

To develop pedagogical, more strictly professional training from a theoretical and practical standpoint.

- In 1967-68, Greece introduced new courses as part of the professional training of teachers (1).
- In 1970, Belgium entirely revised the training curriculum for future primary teachers. This now includes the following subjects: philosophy of science, classroom techniques, observation and guidance and techniques of group leadership.
- In Germany since 1970 the initial stage of training has included the compulsory study of an education subject.

Other measures are designed to intensify the practical aspect of teacher-training by various methods.

- In Belgium since 1970 half of the second year of professional training consists of teaching practice.
- In Denmark one-third of the training period for primary teachers (four years) is devoted to practical training.
- In France the second year of training college includes a three-month period in a school.

To balance academic and pedagogical training so as to achieve an integrated professional training.

Some countries have opted for the integration of the two aspects of training:

- The Netherlands for primary teachers and Germany (in 1970) for the initial training of secondary teachers which includes both university and pedagogical studies, teaching practice and specialised instruction.
- France adopted en 1969 a system of partial integration for training teachers in colleges of general education (CEG), this being spread over three years (2).
- Two countries, Finland and Canada, are considering the problem of academic and professional training, but fear that too much emphasis would be laid on academic training in such a system.

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1) Study of social conditions at primary level and of civics in secondary education.

2) The first year is devoted to university studies, the second year is a mixture of university courses and pedagogical theory, and the third year is centred on theoretical and practical pedagogical training.

The need for all teachers to have higher theoretical and pedagogical qualifications tends to reduce the differences which existed between primary and secondary teachers. Accordingly, some countries have opted for a unified teaching profession.

- Under the 1970 reform, Finland instituted a single teaching body for primary and secondary education, with possibilities of specialisation (1).
- To a lesser extent, from 1970 England decided to make pedagogical training compulsory for all primary and secondary teachers (whatever the level of their academic training).

To link the content of training more closely to the changing structure, objectives and curricula of the corresponding educational levels.

In 1970, the German Education Council recommended that teachers should be trained according to the level in which they are to teach and not according to the type of school (Gymnasium or Realschule).

- In Sweden an advanced English course is compulsory for future teachers in comprehensive schools and gymnasia.
- In Greece the teacher-training colleges were re-organised in 1971. They were reduced in number and their curricula were reformed at the same time as the primary school curricula. In addition, there are two sections in the teacher-training institutes (literature and science) which correspond to the new middle school curricula.

The effect of continual curriculum development on teacher-training is being felt more and more acutely (Sweden).

- In the Netherlands a Standing Committee on Curricula, set up in 1969, is studying the problem of modernising teacher-training in the light of the new curricula.
- In the United States systematic experiments have been carried out on this question and curriculum development is now conducted in the Colleges of Education and tested with the assistance of serving teachers.
- A very interesting experiment is taking place in Spain on the same subject (see C.2 below).

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1) Specialist teachers in comprehensive schools, in vocational education and in the second cycle of secondary education.

c) Development of research activities in the training institutes

We have just seen how, through curriculum development research is becoming increasingly prominent in training institute activities.

- The new system of education studies in training colleges in Belgium, decided in 1970, includes a research activity for students (1).
- In Finland the Act of 1970 provides that research on education will be carried out by the university institutes responsible for training future teachers.
- In the United States research activities in the Colleges of Education are undertaken in co-operation with the university.
- In Japan all research activities are concentrated in the national universities of Tokyo and Osaka.

All the facts and decisions mentioned here suggest that there is a trend towards a much more exacting training system (level of academic and teaching qualifications required, ability to change and adapt to changes) tending towards greater professionalisation of the teaching body.

d) The professionalisation of teachers

Greater professionalisation of teachers is felt to be a need in more and more countries.

- The United States has been concerned with this problem since 1967-68 and research is now being undertaken to define as clearly as possible the aptitudes required for teaching.
- In the United Kingdom a Committee of Inquiry set up in 1970, which should report in the near future, is studying the overall problems of the initial training and status of teachers, the conditions of admission to the profession and the organisation of professional responsibility.
- This question is also being studied by the National Commission for the reform of Teacher Training set up in Switzerland in 1969. On the basis of a fairly detailed theoretical analysis, an attempt will be made to improve

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1) This research activity may deal with the following subjects: educational objectives, creativity structures and adjustment, curricula and learning,etc.

teacher training and to define more clearly the teacher's role and the requirements for the professionalisation of the teaching body (1).

In a more practical context, some countries have introduced a post-training probationary period.

- In *Japan* future principals (at the level of compulsory schooling) have since 1967 been subject to a year's probation.
- In *Austria* the teaching colleges have established a one-year probationary period since 1968.
- In *Germany*, under the 1970 reform, an 18-month probationary period was established after the initial stage of training for secondary level teachers.
- In the *Netherlands*, as from August 1972, intending teachers in technical education are required to do a probationary period of 40 lessons.

This list of measures which are, moreover, somewhat fragmentary, does not claim to be exhaustive since the available documentation was summary and often incomplete. But the facts given here show that the problems of the duration and level of training, which were major issues in the years 1960-65 when the educational structures in the different countries were reorganised, are ceasing to be topical.

Attention is now focused on more basic problems of the teacher's role in a new and continuously changing educational system. In this connection, an issue which is often raised by the countries themselves, although no major decisions seem to have been taken as yet, is the training of trainers.

B. FURTHER TRAINING OF TEACHERS

Until recently, further training was sometimes compulsory and often of short duration (2), consisting of brief training courses or seminars on a general educational subject or on the teaching of a particular discipline, intended mainly for primary teachers. Following the recruitment of auxiliary staff by various

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1) See Bibliography.

2) *Op.cit.*, Paris, 1971.

countries at the height of the shortage (1960-65), certain countries made a great effort to improve the inadequate initial training. This essential work is continuing but the present activity concerns all teachers whether qualified or not, and mainly concerns:

- Introduction to the reforms,
- Type of teaching required for each subject,
- Introduction of new subjects,
- Adjustment to continual innovation in the educational system.

Some short or medium-length training courses are organised to introduce teachers to the reforms, for instance:

- In Finland three-week sessions were organised in connection with the introduction of comprehensive schools.
- In Italy regional didactic centres organised special courses in 1966-67 to prepare secondary school staff for the reforms.
- In Austria, the introduction of the 9th year of compulsory schooling led to a great effort to retrain primary teachers, which began in 1965. This education was compulsory and concentrated on methods, didactics and the balance between the various disciplines (1).
- Again in Austria, a compulsory course was established for teachers of the first class in the higher cycle (new curricula and educational reform in the various disciplines).
- In Ireland, a one to six weeks course in organised for teachers to inform them of the new trends in primary education, the methods and teaching of the various disciplines.

Other training courses refer more specifically to a new discipline or changes in the teaching of a particular subject.

- The Centre belge de pédagogie des mathématiques modernes (Belgian Centre for teaching Modern Mathematics) was established in 1966 in association with the university and offers courses and seminars for primary teachers.
- In France, sessions on the teaching of certain specific subjects (modern literature, modern languages and mathematics) are organised for first-cycle teachers.

Other activities are designed to introduce teachers to new methods or to help them to adjust to continually changing curricula and conditions of work.

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1) In 1970, 30 per cent of primary teachers had taken at least a three-day training course.

- The In-service Training Directorate was set up for this purpose in Turkey and is responsible for bringing teachers up to date in their teaching approach.
- In Norway summer courses are organised on a large scale for primary and secondary teachers, simultaneously with curriculum reorganisation at both levels.
- In Canada primary teachers are introduced to active methods of teaching.
- In Italy teachers in technical education are offered rather long refresher courses (6 months) on changes in the occupational sectors corresponding to their speciality.

These measures, which are certainly essential, nevertheless give an impression of rather uncoordinated haphazard activities, sometimes too specific, sometimes too general, and possibly affecting too few teachers (1). A number of problems have arisen:

- In Switzerland, it is difficult for qualified teachers to find free time for thorough retraining.
- Denmark allows a reduction in teaching hours for any retraining activity lasting six months.
- Attention is also drawn to the scale of the problem, owing to the large number of persons that must be dealt with simultaneously (France).

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1) It is very difficult to ascertain at national level (and even more so at international level) the real coverage of these further training activities which are mostly voluntary but are developing considerably. The available data (International Bureau of Education Reports) are very incomplete and not detailed enough to be anything more than vague pointers. According to these documents, further training activities seem to be quite extensive in the United Kingdom (England, before 1968: 60 per cent of teachers covered by some form of retraining in three years - a criterion common to all the numerical data given in this Note; Scotland, 37 per cent in 1968; Northern Ireland, one-third of primary teachers in 1967 and all secondary teachers). The same may be said of the English-speaking countries in general: Ireland, 50 per cent of serving teachers in 1968-69; United States, about one third of the teaching force per annum (and the same in Denmark). Germany reported 7 per cent of teachers in North Rhine Westphalia in 1968; France, 7 to 8 per cent in 1970 and Finland, 6 per cent in 1965-66. The relative amount of retraining, therefore, varies considerably according to the country but is difficult to assess in cases where television and personal initiative play an important role. It would, therefore, be desirable to know more about real impact of further training activities.

- It is also necessary to determine the real demand (since those concerned (Sweden) are strongly aware of the need for further training) and to assess the value of training courses available at present.

In addition, the effectiveness of retraining at student level depends largely on the speed with which it is disseminated throughout the system.

To solve this problem of scale and meet the need for dissemination, two countries have opted for a system based on voluntary activites, but which might spread rapidly.

- In France, primary education is to be updated in connection with the tripartite system of allocation of school time. The school week has been reduced by three hours in primary education (1). The free time thus obtained is assigned to weekly voluntary training activities, which generally take place on Saturday afternoons in the form of discussion groups led by nationally trained educational counsellors.
- A similar solution was recommended in Belgium for the generalisation of language laboratories in schools; a national retraining centre trains teachers at regional and local level.

Other countries have seemed to be more aware of the need for complete reorganisation of the further training of teachers at national level; training should be general, systematic and integrated.

- In the United Kingdom, four Committee were set up in 1970 to co-ordinate further training at regional level.
- Since September 1969, the Swiss Centre for the further training of secondary teachers has offered a very wide range of choice, including, specialised courses, pluridisciplinary courses, methods, educational psychology, co-ordination of disciplines and school management (principal); group-working is widely used.

In addition, there are other projects such as;

- The establishment in Japan in 1967-68 of an advanced university course at Tokyo and Osaka, one of its objectives being the organisation of systematic retraining of teachers in compulsory education.

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1) Decree of 7th August 1969.

- Ireland is in the process of introducing a new system of retraining in an institute linked with the training colleges.
- Denmark is planning at Odensee a new further training centre to generalise retraining.
- In Spain, the National Centre for Educational Research and Development (CENIDE) is responsible, inter alia, for organising initial training and retraining of teachers.

In addition to these two trends, simultaneous mass retraining and comprehensive systematic retraining, other tendencies, already apparent about 1965, are being confirmed.

Development of links between the bodies responsible for retraining and the university

This is the logical outcome of the strengthening of the links between the training institutes and the university. Until recently, the university provided the academic training of secondary teachers but took little interest in their initial professional training and still less in their further training. It was thought at the time that a sound teacher training could only be obtained in school (schools attached to training institutes). But today the need for more advanced scientific qualifications, adaptability to change and a constant awareness of research possibilities, calls for all or part of the further training activities to be located in a university.

- In England and Norway, much of the further training activities take place in the Open University.
- In England and Wales, serving teachers provisionally have the possibility of obtaining a Bachelor of Education degree while in service (about one-third of the enrolments in the Open University are teachers); courses are given on the educational child psychology, organisation of school work and curriculum development.
- In Finland, the Act on Training provides that all further training activites shall take place in the university.
- In Japan, the structure and content of retraining will be prepared in the university.
- The Centre belge pour la pédagogie des mathématiques modernes in Belgium works in association with the university.

Development of comprehensive long-term retraining (six months to one year) compared with short-term conventional further training.

This type of long-term course is often associated with the idea of advancement or monetary advantages (Norway and Finland).

- For instance, in 1970, Ireland introduced an optional one-year further training course for secondary teachers.
- In Norway since 1970, primary and secondary teachers can follow a further training course at the Open University, spread over sixteen months (teaching methods and practices).
- In Greece, under a Decree of 1971, a third year of specialisation was established for teachers with six to twenty years'service (teaching problems connected with the various disciplines: humanities, science, plastic arts).
- In Spain, sabbatical leave is increasingly granted for specialisation in a training college or university.

Affirmation of the compulsory nature of further training

Generally speaking, this is not a new departure: in a few countries some rather specific short-term further training activities have been compulsory for a long time.

- For instance, in France, seminars for primary teachers.
- In Northern Ireland in 1966, further training was made compulsory for unqualified teachers.
- In Austria compulsory briefing of teachers on the educational implications of the reform of secondary education introduced in 1967-68.
- But since 1969 Yugoslavia (Republic of Croatia) has been setting up a rather long further training system spread over two years which represents a fairly new departure: this is a very comprehensive training (courses, teaching practice, examination,etc.) and is compulsory for all teachers in the first cycle of secondary education with five years' teaching experience.

Towards the introduction of lifelong retraining

In different ways, this is a topical question in Sweden and the United States.

- Sweden is faced with the effect of continual curriculum development on retraining. The teachers themselves are keenly interested, but appropriate working methods and dissemination media have still to be found, at both individual and school level. Summer courses are increasing considerably and are now attended by 15,000 teachers per year. The demand for these courses is double the present capacity and at the moment priority is given to trainers. Each member of the teaching force concerned (about 100,000) can now benefit from a summer course once every five years.

- In the United States, summer schools prepare teachers for lifelong self-retraining. This type of training is organised in the Graduate School of Education at Harvard University and operates as follows: an entire school is opened for three weeks of the holiday period, the students being paid to attend. For each teacher, work time is divided into three, comprising:
  - one week of preparation;
  - one week of experiment; and
  - one week of evaluation.

The few points mentioned here do not claim to be exhaustive; only national measures introducing innovations and on which information was sufficiently detailed have been used as examples.

There are other problems outstanding, such as methods of retraining to generalise dual specialisation for secondary teachers in the Netherlands. In a more general context, closer links must be established between initial and further training institutions, the schools and educational research carried out in the universities.

C. IMPLICATIONS OF THE DEVELOPMENT OF EDUCATIONAL TECHNOLOGY FOR TEACHER TRAINING AND RETRAINING

The use of audio-visual aids in school activities is of long standing. In the 1960's in many countries it was extended gradually to all available audio-visual aids. In particular, television support programmes were developed almost everywhere to make up for the recruitment of unqualified teachers during the period of shortage. Although this will soon no longer be a special problem, Germany, Turkey and Italy have recently given new impetus to this form of school television.

Nevertheless, the distribution of "prefabricated" lessons in every part of the country has proved to be a far too elementary way of using television as a teaching aid. The teachers themselves do not welcome this intrusion of educational material to which they feel alien and which, they think, devalues their own role.

It became apparent about 1967 that the quality of mass education could not be improved merely by employing an ever greater number of highly qualified teachers and that other resources would have to be found. Consequently, numerous research programmes were developed on educational aids as a whole (television, programmes, language laboratories, closed circuits, films, slides,etc.)in order to define their respective functions and practical ways of using them. These programmes deal more with the production of high-quality software than with ways of developing hardware, which was the major concern of the 1960-65 period.

Belgium, France and the United Kingdom have begun research on these lines, the main subjects being:

- Evaluation and improvement of the quality of educational material, with reference to content and educational value;
- Research on the specific contribution of the various educational aids;
- Testing of new electronic equipment permitting simultaneous interventions and the immediate detection of slowness or misunderstandings, etc.

In the Netherlands, a research programme on the development of audio-visual aids and programmed instruction is in hand. In Spain, one of the objectives of the National Centre for Educational Research and Development (CENIDE) established in 1969 is to promote educational technology (see below). Finally, in the United Kingdom the National Council for Educational Technology set up in 1969 is responsible for the organisation, reform and co-ordination of existing services. The scale of the research programmes which are developing almost everywhere and the important role that educational technology has to play in the organisation and content of school activity imply a strenuous effort of teacher training and retraining on the part of the responsible authorities.

1. In-service training

It was essential to have information on the various educational media and, for some time, many countries have been working on these lines.

- In 1966 an in-service training centre for initiation into audio-visual methods was set up in Belgium.

- *Germany* is organising seminars on programmed instruction.
- In *Greece* seminars were established in 1968 to study the use of all audio-visual aids.
- In *England* and *Wales* the educational institutes are responsible for organising information conferences on educational technology.
- Special attention is being paid to the development of language laboratories; in *Finland* three-week seminars are organised for this purpose.
- In *Belgium* a great deal of work is being done at teacher level using a regional and local network.

In addition, audio-visual media are often used as a support in retraining activities either for initiation into a new discipline (accelerated training) or to handle educational problems. In this connection, television has played a major role in introducing new mathematics (France and Canada).

- In *France* a series of physics programmes on the lines of the "Chantiers mathématiques" has been presented since 1969-70. There are also educational support programmes in numerous countries. In France, school television produces many programmes of this type, such as educational workshops, classroom techniques, the art of understanding the student. In the same context, a series of television programmes on curricula and new approaches to education is being given in *England* and *Wales*.

Some countries have even made quite extensive use of educational media.

- In *England* educational technology is systematically included in any retraining activity.
- In *Denmark* (Jutland), magnetic tapes are used in retraining.
- Finally, in the *United States*, serving teachers have access to a wide range of self-teaching equipment (see below).

2. Initial training

A similar effort is also needed at this level. All the new training systems now include an introduction to, and practice with, audio-visual aids: magnetic tapes, closed-circuit television. the videotape machine, and films are the materials most commonly used. After all, if the aim is to get intending teachers to use a method systematically, the quickest way to achieve it is to make them learn their profession by such methods. This principle is already applied in certain countries, including France and Sweden.

Two recent cases for which rather fuller information is available are worth mentioning:

- In Spain at CENIDE (1) 200,000 future teachers and 150,000 serving teachers are co-operating in the preparation of new curricula for primary schools. New educational material is designed and tested as part of the practical work with a computer. Groups of 15 teachers and 10 children work together for three consecutive weeks (2) and produce the software for the machines preparing the new curricula. The experiment should last from 18 months to two years. As from 1974-75, the curricula thus designed and tested will be available in the educational institutes where technical and teaching staff will be instructed in their use before they are generally issued throughout Spain.
- In the United States, rather novel teaching equipment is systematically used for teacher training. Micro-educational series (video-recording) enable the student-teacher to assess his behaviour in a real situation. Mini-courses (self-teaching programmed material) are now used in over 50 per cent of the training colleges and enable the future teacher to test and improve his teaching efficiency.

CONCLUSION

Several observations may be made on the above information. In most cases the activites described are too fragmentary and might justifiably be regarded as of minor importance. Nevertheless they are more concerned with basic problems than previously, and in some instances, more fully integrated policies are gradually being introduced. This phenomenon should develop in future; and indeed it must, since previous studies on these problems have

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1) National Centre for Educational Research: See Newsletter No. 3, 1971 (Council of Europe).

2) The object of forming these groups is to provide a sample enabling all teaching problems which might arise in a class to be dealt with in the laboratory.

shown that any policy designed to transform the operation of the educational system must be comprehensive to be effective. Otherwise, changes often produce inertia in the teaching staff and create some confusion among the students who have to adjust throughout their schooling to a succession of different and often confliction methods. It should perhaps be emphasized that, while a fairly consistent general impression emerges at international level, this is not so at national level. Developments have been unremarkable compared with the situation around 1965.

On the other hand, there are large gaps in the available documentation. There is an almost general lack of information on how the measures were applied and, even more serious, there is no systematic evaluation (assessing any possible extension at national level) of the new pilot experiments which are developing everywhere. It is, therefore, impossible to judge what progress has been made, and the advance of research to evolve a concrete definition of a new system of learning is being held up.

Educational technology is becoming increasingly important at all levels and certain results could now be exploited quite extensively. It is possible to discern the beginning of a change which in future will affect school systems at all levels:

- Definition of the objectives and policies of developing the system;
- Methods of forecasting staffing requirements (1) and other educational inputs;
- Evaluation of school activity for both teacher and pupil;
- New way of integrating changes.

This limits even more, if that were possible, the value of the quantitative analysis of the basic statistical tables. But, apparently, it will be a long time before adequate evaluation data are available.

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1) In England and Wales, the 1970 Committee of Inquiry sought to improve the system of forecasting staffing requirements which are calculated in terms of size of school and not of total number of pupils.

II

QUANTITATIVE ASPECT

A. PRIMARY EDUCATION

1) Trends in pupil/teacher ratios from 1965 onwards

Table 1 shows overall trends in pupil/teacher ratios for a number of countries. It covers only those countries in which full-time teachers could be counted separately or where the activity of part-time teachers could be calculated in terms of full-time equivalent. However, some of the countries covered in Table 1 do use part-time staff. In such cases, the pupil/teacher ratio will be better than it seems, although the existence of such staff may also indicate some difficulty in adjusting teacher supply to demand. However, the fact remains that the situation is difficult to interpret without specific surveys.

Thus, in Germany, the number of part-time teachers is increasing as well as their teaching load. This situation coexists with the following factors:

- the improvement in the ratio was slower between 1965 and 1970 than during the previous period;
- the ratio in 1970 was higher than the standards laid down by the national authorities.

On the other hand, all countries of the United Kingdom use part-time teachers (converted to full-time equivalent in the tables) but, in view of the stability of the overall situation in these countries, the presence of such staff cannot be regarded as a possible indicator of tension between teacher supply and demand. It seems that these countries have reached a more or less balanced position. However, in England and Wales (1), although the duties

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1) For some years now, this country has practised a systematic policy of recruiting part-time teachers.

of part-time teachers remained steady between 1965 and 1970, the quantitative increase in this type of staff (in physical terms) has been slightly faster than that of full-time staff.

The trend in part-time personnel cannot, in fact, be used as an indicator of the extent to which teacher demand is met, as the particular national patterns differ too widely. While it is true that such teachers are fairly uncommon in primary education, a substantial amount of supplementary data would be needed in order to obtain an accurate knowledge of the real situation peculiar to each country: for example, the full-time equivalent of part-time teachers and the overtime worked by full-time staff, duties fulfilled by these teachers, relationships between the use of such staff and trends in teaching structures in primary education, demand for such short-time activity, geographical distribution of schools using part-time staff, etc.

Generally speaking, the data given in Table 1 relate to public and private education as a whole, but those for a few countries (Netherlands, Norway, Portugal and the United Kingdom) cover public education only; in these countries, private education utilises a greater or smaller proportion of part-time teachers whose real teaching load is not known.

To make comparisons with the period prior to 1965, reference will be made throughout the text to Volume V of the Conference on Policies for Educational Growth (1), Tables 2 and 7. The comparability of the data has been verified in every case.

One initial fact is clear: by the end of the period, all countries had improved on their 1950 situation (the base year for the previous study on teachers when the shortage had not yet become apparent). Many countries showed a substantial improvement on 1950. The current situation in the others is undoubtedly better than in 1950, although no precise relationship can be established with the tables of the previous study.

This general situation covers very different trends in the individual countries. On the basis of the influence on teacher demand attributable to the demographic factor (trend in number of pupils), the various countries covered by the survey can be broken down into four groups.

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1) OECD, Paris, 1970. Teaching Resources and Structural Change. The first part of this document is entitled "Teaching staff and the Expansion of Education in Member Countries since 1950" and comprises, in part, a synthesis of Training, Recruitment and Utilization of Teachers in Primary and Secondary Education, OECD, 1971.

Table 1

TREND SINCE 1965 IN THE PUPIL/TEACHER RATIO (FULL TIME) IN PRIMARY EDUCATION

Countries in which :	1950 (1)	1965	1966	1967	1968	1969	1970
I. The number of pupils increased during the period :							
Germany (2)	48.0	33.1					31.5
Austria (3)	30.0	27.5					27.7
Spain (4)	"	34.7				35.2	
Italy (5)	"	22.1				21.7	
Netherlands (5)	35.0	31.3					29.7
Portugal (5) (public)	40.6	32.6					34.2
United Kingdom (5) (public)	-	28.1				27.6	
England-Wales (4) (public)	30.0	28.0					26.2
Scotland (5) (public)	-	-	29.2				27.8
Northern Ireland (4) (public)	32.5	29.5					29.0
Turkey (2)	"	45.8					37.8
II. The number of pupils remained stable during the period :							
Belgium	23.7	22.4					21.1(6)
United States (4)	"	28.1					25.0
Greece (5)	"	35.2				33.3	
III. The number of pupils diminished during the period :							
Finland (5)	-	22.8				21.5	
France (5) (public)	25.2	26.2					23.2
Japan (5)	36.5	27.6					25.8
Luxembourg (3)	"	25.0					22.1
Norway (2) (public)	28.7	23.9					22.6

1) Cf. Vol. V, *op. cit.* Table 7 : the sign " means not comparable (figures are given separately for public and private) ; the sign - means not available.

2) Primary and upper-primary : the latter category can take different forms (see the basic tables), which is of little importance if the teachers are comparable to those in primary education in the strict sense.

3) Primary, upper-primary and special education.

4) Primary and all/some of the pre-primary schools.

5) Primary education in the strict sense.

6) 1971-72.

The first group covers the countries in which the number of pupils has increased since 1965 (cf. first part of Table 1). The influence of the demographic factor has not been identical in these various countries since 1965. Some recorded a slower rate of expansion in the numbers of pupils either before 1965 (Netherlands, Spain), or since 1965 (Germany, Italy, Portugal, Turkey). These countries were able to consolidate the situation and improve the pupil/teacher ratio by maintaining a greater inflow of teachers than pupils. In countries where the school population was definitely stabilising, a slow-down in teacher recruitment, following a sharp acceleration in the previous period, led to an improvement in the pupil/teacher ratio. In fact, as shown in the table, the real situations of the various countries differ considerably (see the basic tables in Part Two of this volume).

Thus, demographic pressure in Austria was experienced later than in the other countries and the increase in enrolments has occurred mainly since 1965. The pupil/teacher ratio has remained stable, though showing a tendency of rise.

In Portugal, after an appreciable effort in the years 1960-1965, there has since been a slackening in teacher recruitment and a slight deterioration in the pupil/teacher ratio in public education.

The United Kingdom countries have had to cope with a different situation that, compared with the other countries, has been marked by uniform growth entailing great stability in the pupil/teacher ratio, which has nevertheless shown slight downward trend.

The characteristic feature of the second group is the stability of the primary school population. Three very different countries are in this group: Belgium, the United States and Greece. The current data are not always comparable with those given in Volume V but, as far as can be ascertained, each country has improved the pupil/teacher ratio since 1950. In the United States, there is a particularly sharp trend towards improvement which has been accelerating since 1965.

The countries in the third group have had diminishing school populations for several years (1). Quite logically, these countries show a downward trend in the pupil/teacher ratio under conditions

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1) France and Japan between 1960 and 1965, and Norway in 1965. Luxembourg, after some levelling-off around 1966, recorded a drop in 1968. No data are available for Finland prior to 1965.

which vary according to the initial situation and the policy adopted in the earlier period. In Finland, the ratio improved despite a drop in the number of teachers. In France - which up to 1960 experienced considerable difficulties owing to an inadequate supply of teachers - the ratio has steadily improved since then with some acceleration after 1967. Japan, which managed to recruit substantial numbers even at the beginning of the period of shortage, has now achieved equilibrium and the decline in the pupil/teacher ratio is tending to slow down (1).

Luxembourg managed to keep the pupil/teacher ratio stable during the period of crisis, but it has been declining since 1966. In Norway, numbers of both pupils and teachers have decreased since 1965. The pupil/teacher ratios in both Norway and Finland are among the lowest, and these two countries (together with Sweden and Denmark) are the only ones in which the number of teachers is diminishing.

The final group covers countries for which pupil/teacher ratios could not be calculated, as the number of part-time teachers could not be determined separately. The statistics available on some of these countries are too inadequate to reveal a trend, but some observations are possible on the others. The available Canadian statistics cover primary and secondary education combined. Between 1965 and 1970, the number of teachers increased by 25 per cent and the number of pupils by 13 per cent. Basic Table 5.1 shows the large amount of part-time teaching and overtime done by teachers in Denmark where it is noted that the number of pupils increased by 5 per cent and the number of teachers by 15 per cent between 1965 and 1970.

Moreover, the pupil/teacher ratio is excellent in Denmark (2).

Since 1965, Sweden has had an extremely low (19.0) pupil/teacher ratio [Volume V, op. cit., Table 7]. Between 1965 and 1970, the number of pupils dropped by 5 per cent and the number of teachers by only 4 per cent.

In Yugoslavia, in primary education and the first cycle of public secondary education, the pupil/teacher ratio was calculated at 31.0 for 1964 [Volume V, op. cit., Table 7]. Between 1965 and 1970, the number of pupils diminished by 4 per cent while teachers increased by 16 per cent. There was likewise an increase in the

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1) There is even a drop in the number of part-time teachers.

2) Cf. Etude sur les enseignants - Study on Teachers: Denmark, Table 8, page 35, OECD, Paris, 1968.

number of part-time teachers, so the pupil/teacher ratio has certainly improved.

Although the downward trend in the pupil/teacher ratio (independently of the individual situation in each of the above-mentioned countries) is more clearcut in countries where the number of pupils is diminishing (third group of countries), according to statistics currently available it appears that all countries have not only made up the shortage of the 1955-1965 period (or are in the process of doing so) but have even managed to improve the situation in relation to 1950 (1), despite the current, and sometimes important (Turkey), influence of the demographic factor. It seems that a more or less balanced position is being achieved.

The remarkable fact is that this state of equilibrium is found at different levels. In this connection (and for countries in which it has been possible to calculate the pupil/teacher ratio), three groups may be noted: the first group includes the Scandinavian countries, United States, Italy and Luxembourg where there is a low ratio of less than 25. A second group covers the countries of the United Kingdom, France and Japan where the pupil/teacher ratios at the end of the period had an "average" value between 25 and 30. Lastly, there are the Mediterranean countries where the ratio is 30 or over. This summary classification ignores fringe phenomena and very similar situations but, allowing for the impression of equilibrium emerging from the above analysis (2), shows that criteria differ according to country in relation to different pedagogical factors. To take extreme cases, about 1963, Turkey (3) considered that the ideal pupil/teacher ratio was 40 (this norm has since improved). At about the same time, Germany considered that the aim should be to achieve a ratio as close as possible to Scandinavian norms.

In a traditional education system, both norms may be equally valid. Their validity depends on real working conditions, the organisation of work in the classroom, the competence of the teacher, the objectives of education at this level, etc. While it can

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1) At that time, some less-developed countries were lagging somewhat behind, but they have now caught up, or are attempting to do so.

2) Comparative study of growth rates in numbers of pupils and teachers and trends in the pupil/teacher ratio.

3) Turkey's Manpower Requirements and Education Targets 1962-1977; State Planning Organisation, Ankara, May, 1962.

therefore be said that, in the absence of any subsequent change in the demographic factor, the shortage has been checked and the new situation is quantitatively better than at the start, it can by no means be claimed that some countries will experience, or are likely to experience, a period in which there will be some degree of surplus and a greater or lesser number of trained teachers will be unable to enter the teaching profession (1). This would be to forget that national authorities usually control the recruitment from teacher training colleges and that possibilities of moving from one educational level to another can exist in the education system is sufficiently flexible. Such possibilities have sometimes been utilised on a large scale in the past, and adjustments during the period of compulsory schooling (secondary level) can offer possibilities of this type of promotion in the future.

It is becoming increasingly clear, moreover, that the traditional system of education (the teacher and his class) no longer answers current needs, and research is in hand not only with a view to the integrated use of the various teaching media (radio, television, films, machines, etc.) and the relevant technology, but also primarily with a view to developing new models of learning. Fundamental research and the evaluation of pilot experiments relating to these problems can, in the more or less short term, lead to a totally different kind and structure of teacher demand, for which the utilisation of existing criteria (particularly the pupil/teacher ratio) will no longer be meaningful. However, as this ratio is the only convenient tool available at present, it has to be used for want of a better one, although it remains very rough and ready even for evaluating the situation specific to a single country.

Very important differences are concealed by the general lack (in the published statistics at our disposal) of detailed regional data, broken down according to the degree of urbanisation. Data on trends in the number of pupils per class (though only national averages) would probably provide useful additional information. Unfortunately this information could be obtained only for a small

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1) The case of the Mediterranean countries (including Italy) should be examined closely owing to the particular system of recruitment in these countries (competitive examination on qualifications, including pedagogical training) and the level of teacher training (place of teacher training colleges in the education system).

number of countries and makes little contribution to the study, merely confirming what is already known (1). While the pupil/teacher ratio is a poor instrument of analysis at national level, it is even worse at international level since the value of the ratio is largely determined (as already demonstrated) (2) by the aims pursued in each country.

2. Trend in the proportion of teachers considered as unqualified

Notwithstanding the value of data relating to the level of teachers' qualifications, attention must be drawn to the inadequacy of official statistics in this field. In the circumstances, it is quite difficult to discern a trend, which could be done in the previous study owing to the more detailed statistical data contained in the case-studies. Table 2 covers the few countries which can in fact be examined. Data prior to 1965 are taken from Table 9 in Volume V referred to above. The comparison over the long term is based on the inverse proportions of the data contained in Table 9. The concept of qualification studied is defined for each country on the basis of national criteria. Accordingly, the norms differ from one country to another and may be primarily pedagogical (training) or administrative (recruitment examinations). For most of the countries covered by Table 2(3), the concept of qualifications is defined primarily on the basis of pedagogical criteria (teacher training college diploma or equivalent). If the whole teaching body is considered, percentages of qualified teachers increased appreciably everywhere between 1965 and 1970. In cases where separate data are available, it is noted that the percentages of qualified women teachers are

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1) A diminishing average number of pupils per class:
   - Japan 45 in 1963 and 33 in 1969;
   - Germany 35.1 in 1965 and 34 in 1968.

   A stable average number of pupils per class:
   - Italy 16 in both 1965 and 1968;
   - France 27.8 in 1965 and 27.4 in 1968;
   - Austria 30.6 in 1965 and 30.4 in 1968;
   - England - Wales 32.6 in 1965 and 32.7 in 1968 (there are detailed statistics for this country).

2) Training, Recruitment and Utilization of Teachers in Primary and Secondary Education, OECD, Paris, 1971.

3) Very imprecise criterion for Japan. In Finland, the number of qualified teachers is obtained by deducting the number of unqualified teachers indicated in official statistics.

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Table 2

TREND SINCE 1965 IN THE PERCENTAGE OF FULL-TIME PRIMARY SCHOOL TEACHERS CONSIDERED AS QUALIFIED

	1950 (1)		1965		1966		1967		1968		1969		1970	
	MF	F	MF	F	MF	F	MF	F	MF	F	MF	F	MF	F
Homogeneous long-term series (1) :														
Denmark (4) (public)	90	78	88.6	85.2									94.2	91.6
Ireland (5)	75	67(2)	87.3	83.6			89.5	86.9						
Luxembourg (4) (public)			98	97(3)									91.2	
Portugal (5) (public)	78	74	84	81									90.0	88.3
Non-homogeneous long-term series (1) :														
Austria (4)			87.3	86.1									91.1	90.8
Belgium (5)			98.6		98.8									
Finland (6)			94.0								96.1			
Japan (5) (public)			90.3										90.0	
Norway (6) (public)			87.6	86.2									95.0	95.0
United Kingdom														
England (7) - Wales (1) (public)			97.4	96.4									100.0	100.0(8)
Scotland (5) (public and grant-aided)			94	94(3)	97.0	85.3							99.7	87.2

In Greece, Italy and Spain all teachers are qualified. See the note to Table 17-I with respect to the Netherlands.

1) 1950 or other year prior to 1965 : cf. Vol. V, op.cit, Table 9.
2) 1955.
3) Cf. Vol. V, op.cit, Table 9.
4) Primary, upper primary and special.
5) Primary only.
6) Primary and upper primary.
7) Primary, secondary and pre-primary. The series is not homogeneous over the long term.
Data in Table 9 relate to part-time qualified teachers and have not been available since 1965 : cf. Study on Teachers - United Kingdom , OECD, 1969, Annex III, Table I (d), page 239.
8) Provisional data.

always lower than those of men. However, percentages of qualified women teachers have increased more rapidly than those of men since 1965. This may therefore indicate that women are beginning to catch up (already evident in Norway), even if differences in the percentages persist.

The first part of Table 2 covers countries for which the trend in percentages of qualified teachers may be studied over the long term (Denmark, Ireland, Luxembourg and Portugal).

The long term data (1950-1968) are not homogeneous for the countries listed in the second part of the table. Furthermore, data relating to the 1965-1970 period are very fragmentary.

At the end of the period and solely for the countries studied, the average percentage of qualified teachers reaches the high level of 94.7 per cent. Is it to be concluded that the remaining small percentage of unqualified teachers were recruited during the period of shortage through auxiliary recruitment procedures ? Are they or are they not now being assimilated to qualified teachers by means of retraining or administrative establishment?

In relation to the (extremely rare) data available for the 1950's (considered as a stable period before the appearance of a shortage), it may be argued that at the time of the latest data available, when the proportion of unqualified teachers was higher than 10 per cent, the pupil/teacher ratio about average (between 25 and 30) and the number of pupils increasing, it is impossible to talk of a potential surplus. On the other hand, when there is a high percentage of qualified teachers, a decreasing number of pupils and a low pupil/teacher ratio, it can be said that the very small number of countries in this situation (1) may then reach a kind of threshold that may lead to a reduction in the teaching force. Between these two extreme situations, there are many cases where the responsible national authorities have a margin of adjustment (2) (changes in the pupil/teacher ratio, changes in the percentages of qualified teachers, regulation of admission to training institutes). Here too, however, while the percentage of qualified teachers is a very important indicator, it covers widely different national situations and the standards adopted by the countries may not always be consistent with the objective requirements of a primary education in process of renewal.

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1) Denmark, Finland, Luxembourg and Norway.

2) Japan is expecting demographic pressure in primary schools after 1974. The number of students has increased in training institutes since 1970.

In short, with a favourable situation (on aggregate better than in 1950) on the basis of traditional criteria, it is perhaps too early to talk about the possibility of a surplus in view of the changes in teacher training systems (1) which have recently been (or will be) experienced in the various countries and which may substantially modify the relative value of such studies in the future.

3. Trend in the percentage of women teachers in primary education

During the period of shortage, many countries tried to call on the reserves of skills and qualifications represented by graduate women teachers.

For general reasons (more women at work, etc.) and as a result of specific measures, the proportion of women in the primary school teaching force increased everywhere during the period 1950-1965. What have been the subsequent developments as regards this trend towards more women teachers ?

The trend in the percentage of women teachers is a relatively poor indicator which can be used to determine a factual situation but not to detect its causes; for the latter, a number of other factors must be known: attraction to the teaching profession, trend in the proportion of women in occupations during the period of active life, variation in the proportion of women graduates in teaching posts compared with those engaged in the organisation of school work, etc.

To evaluate the current trend of teachers in primary education as compared with the period 1950-1965, reference has been made to Table 25 of Volume V, op. cit. Table 3 gives the percentages recorded in 1950, 1965 and in the last year for which they are available (cf. basic tables). In the previous period, most countries recorded a figure below 50 per cent, whereas the current figures (most recent dates available) are usually over 50 per cent. However, there is currently a relative decline in the number of women in teaching in a larger number of countries (seven) than in the previous period (two). Despite this limitation, Table 3 suggests that the trend towards a higher percentage of women teachers in primary schools - which was very generally confirmed during the 1950-1965 period - is continuing and perhaps even strengthening.

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1) Extension of school attendance; teacher training advanced to post-secondary or university level.

Table 3

TREND IN THE PERCENTAGE OF FULL-TIME TEACHERS IN PUBLIC AND PRIVATE PRIMARY EDUCATION IN SOME OECD COUNTRIES

	1950	1965	Latest year for which data is available
Germany (1)	38.0	52	59.0
Austria (2)	54	57	59.6
Canada (4)	*	64.8	66.6
Denmark (2)	*	49.6	52.7
Spain (3)	60	63.4	64.1
Finland (1)	*	60.8	59.7
France (public)	62	65.1	67.5
Greece public	54	45.1	46.5
private	*	54.8	54.7
total	*	45.8	47.3
Ireland (3)	*	69.0	68.7 (6)
Italy public	71	73.2	76.1
private	*	93.4	94.1
total	54	74.4	77.1
Japan	49	48.6	50.9
Luxembourg (2) (public)	50	50	49.7
Norway (1) (public)	44	53.5	57.0
Netherlands	46	51.6	49.4
Portugal public	85	87.7 (5)	88.9
private	*	86.1	88.8
total	*	87.6	88.9
England-Wales (3) public	74	70.8	75.7
private	50	54.6	62.3
total	*	69.6	75.0
Northern Ireland (public)	69	74	73.7
Scotland (public)	84.0	86.0	87.2
Sweden (public) (2)	66	76.0	79.0
Turkey public	26	26.3	32.3
private	*	77.9	83.8
total	*	27.2	34.0
Yugoslavia	57	58.7	57.6

N.B. The sign * means that there are no data available for the previous period or that the data for the two periods are not comparable.
No data available for Iceland, United States and Switzerland.
In the following three cases, data are available for one year only :
Belgium 54.9 per cent in 1965 ; United Kingdom 77.3 per cent in 1967 ; Scotland 85 per cent in 1965.
Unless otherwise indicated in a note, data relate to primary education only.

1) Primary and upper primary.
2) Primary, upper primary and special.
3) Pre-school and primary.
4) Primary and secondary.
5) 1966 : trend over one year only.
6) 1966.

Source : Vol. V, op. cit. Table 25 for 1950, Basic Tables, Series I.

Table 4

COMPARATIVE INCREASES IN NUMBERS OF MEN AND WOMEN TEACHERS
IN PRIMARY EDUCATION SINCE 1965 = INDICES (1)

	1967		1968		1969		1970		Trend in pupil/ teacher ratio (2)
	M	F	M	F	M	F	M	F	
Austria							109	121	=
Denmark			107	112					*
Finland					94	90			-
France					95	105			-
Greece					100	106			-
Ireland	95	104							*
Italy							95	110	-
Japan							101	112	-
Norway							87	96	-
Netherlands							114	104	-
Portugal	100	-5 100					95	108	*

1) 1965 = 100.
2) The signs indicate :

* : pupil/teacher ratio is unknown (see Basic Tables, Series I) ;
- : decline in pupil/teacher ratio ;
= : stable pupil/teacher ratio.

For eleven countries, the increase in the teaching force has been calculated in indices for men and women separately (Table 4). Only Finland (decrease in the number of pupils) and the Netherlands (previously substantial utilisation of women staff, but current increase in number of pupils) show a relatively greater decrease in the number of women than men. In all other cases, the number of women teachers is increasing more quickly than that of men (in Norway, the decrease in the number of women is slower than that of men). In four countries (France, Greece, Italy and Japan), the number of women continues to increase while the number of men declines, and it is noted that the pupil/teacher ratio in these countries is improving at the same time. However, only Italy records an increase in the number of pupils (one point below that of teachers); in this case it is clear that the improvement in the pupil/teacher ratio is attributable to a greater proportion of women teachers. The increasing proportion of women is even more evident in France, Greece and Japan as, with the decrease in the number of pupils, the number of teachers is also diminishing.

Are promotion mechanisms more favourable to men than women, or do women tend to remain at the same level (women perhaps retrain less)? Generally speaking, the proportion of women in the teaching profession has largely contributed to the improvement in pupil/teacher ratios in primary schools. However, the available data are very fragmentary and each country offers specific situations which preclude hasty generalisations. In addition, the available data are inadequate to determine the deep-seated causes of the various trends recorded.

B. GENERAL SECONDARY EDUCATION

1. Comparative growth in the number of pupils and teachers

During the period 1950-1965, there was a very substantial increase in the number of pupils and teachers in general secondary education. This increase was even higher than that recorded in primary education (1). Thus, for the following two reasons, the situation in secondary education seemed less favourable than that in primary education:

- the increase in the number of pupils was greater in general secondary than in primary education;
- numbers of pupils being equal, secondary education uses more teachers than primary education.

How has the situation developed since 1965 ? Table 5 [following up Table 3 of Vol. V, op.cit.] gives indices for the comparative increases in numbers of pupils and teachers in most Member countries. Examination of this Table 5 gives rise to the following observations: as far as can be ascertained, since 1965 there has been a reversal of the trend for the countries as a whole, since only 3 out of 22 recorded higher increases in

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1) Conference on Policies for Educational Growth, Paris, June, 1970. Volume V, Part One, "Teaching Staff and the Expansion of Education in Member countries since 1950", Table 3.

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Table 5

COMPARATIVE GROWTH IN NUMBERS OF PUPILS AND TEACHERS IN THE FIRST AND SECOND CYCLES
OF PUBLIC AND PRIVATE GENERAL SECONDARY EDUCATION

	1966 (1)		1967		1968		1969		1970	
	Pupils	Teachers	Pupils	Teachers	Pupils	Teachers	Pupils	Teachers	Pupils	Teachers
I. Full-time teachers only										
Increase in technical staff smaller than in pupil endowments										
Germany	108	107	124	117	133	127	142	138	145	146
Spain (public)	119	108	166	126	201	155				
Greece (public)	104	108	110	106	109	107	113	110		
Scotland (public and grant-aided)	100	100	102	102	106	103	111	104	115	118
Turkey	114	113	138	97	158	118	176	114	193	150
Increase in teaching staff greater than or equivalent to that in pupil endowments										
United States (general and technical)	102	105	106	109	112	115	116	120	119	123
France (first cycle C.E.G., public)	100	100	91	91	86	87	77	86	61	79
France (second cycle general and technical, public)	98	101	97	103	95	104	93	108	95	112
Italy	104	105	109	109	114	114	118	120		
Japan (first cycle, general)	93	98	89	97	84	97	81	95	79	94
Japan (second cycle, general and technical)	98	102	94	103	89	103	86	104		
Norway	106	109	110	119	122	131	123	141	128	152
Portugal (public)	107	104	112	118(3)						
United Kingdom (general and technical, public and grant-aided)	101	101	103	104	105	106	108	110		
England and Wales	102	101	104	103	106	106	108	109		
Northern Ireland (public and grant-aided)	105	107	112	112	117	119	121	125	125	133
Yugoslavia	100	105	100	109	101	112	100	131	99	114
II. Full-time and part-time teachers (pro. mem.)										
Denmark (second cycle) (2)	100	100	108	106	117	111	122	117	127	127
Sweden (general technical and vocational, public)	107	*	106	108	103	95	106	97	95	99
Finland	105	105	109	109	114	115	118	120		
Ireland	104	106	120	120						
Luxembourg (second cycle, public)	104	*	109	*	120	*	127	136	132	133
Netherlands (second cycle)	102	*	107	116(3)						

N.B. Data not available or inadequate (one year only) for Austria (see note to Table 2-II) Belgium, Canada (cf. primary education) and Iceland.

1) 1965 = 100.

2) Large number of part-time and full-time teachers who work overtime.

3) Change in structure.

the number of pupils than teachers. Furthermore, those countries have the highest increase in school enrolments. The others quite clearly show a less-marked increase in numbers of pupils than in the previous period.

As secondary school teachers specialise in a subject (sometimes several subjects in the case of those teaching in the first cycle of secondary education), observation of the pupil/teacher ratios throughout the period can give only a very vague indication of how the supply of teachers meets the demand. For information, Table 6 shows the trend in this pupil/teacher ratio for a few countries. The ratio is based on full-time teachers only; however, the real situation differs according to the country. For some (Germany, United Kingdom (1), England and Wales, Scotland), it covers full-time teachers and full-time equivalent of part-time teachers, in which case the pupil/teacher ratio is to some extent realistic. For other countries (Italy, Portugal, Spain, United States), on the basis of what is known of the education system, all teachers are considered to be working full-time, although this assumption may result in over-estimating the pupil/teacher ratio. The ratio is under-valued in the case of the other countries shown in Table 6.

However, this fact is of little importance since, when the full-time equivalent of part-time staff in a single year for a country happens to be known, the pupil/teacher ratio varies little (2). Thus, in Northern Ireland, the full-time equivalent of part-time teachers is known for 1967, and the pupil/teacher ratio is 19.5 instead of 20.1. In France, in the general and technical long second cycle, the number of part-time teachers (3) is tending to increase (2,611 in 1965 and 7,390 in 1968) but, in physical terms, accounts for only 0.9 per cent of the total teaching force at this level. In Greece, there are no part-time teachers in the strict sense, but full-time staff may work overtime. overtime has been converted into full-time equivalent for 1966 (278 teachers) and the re-calculated pupil/teacher ratio is 29

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1) United Kingdom : re-grouped statistics.

2) In the second cycle of secondary education in Norway, however, more than 40 per cent of the total teaching force are on a part-time basis.

3) Statistics on part-time teachers are individual school statistics; double counting is frequent and the teachers of some special subjects may in fact be working full time.

Table 6

TREND IN THE PUPIL/FULL-TIME TEACHER RATIO (1) IN THE FIRST AND SECOND CYCLES
OF PUBLIC AND PRIVATE GENERAL SECONDARY EDUCATION IN SOME
OECD COUNTRIES

	1965 (2)	1966	1967	1968	1969	1970
Germany	19.7					19.5
Spain (public)	28.2			36.3		
United States (general and technical, public)	20.8					20.0
France (C.E.G., public)		21.9				18.6
France (second cycle general and technical, public)	18.7					16.1
Greece (public)	31.0				32.0	
Italy	12.3				12.0	
Japan (first and second cycles general and technical)	25.6				21.6	
Norway (second cycle)	17.5					14.6
Portugal (public)	22.0					19.3
United Kingdom (including technical, public and grant-aided)	17.9				17.6	
England and Wales	17.3					17.3
Scotland (public and grant-aided)		15.0				15.8
Northern Ireland (public and grant-aided)	20.1					18.9
Yugoslavia (second cycle, public)	22.5					19.5

1) Full-time staff except for a few countries where the full-time equivalent is available for part-time teachers, namely Germany, United Kingdom, England, Wales and Scotland.

2) For the years prior to 1965, when the series is homogeneous, cf. Conference on Policies for Educational Growth : Vol. V, op. cit., Part One, Table 8.

United States	1955 : 20.9	Greece	1955 : 36.0
France C.E.G.	1950 : 18.5	Portugal	1960 : 22.2

instead of 29.7. In Japan, the number of part-time teachers increases slightly in the first cycle (3 per cent between 1965 and 1967), but accounts for only 0.04 per cent of the total teaching force. In the second cycle, the number of such staff decreased between 1965 and 1966 (-5 per cent), i.e. by 0.1 per cent of the total. Norway has most part-time teachers; they accounted for 17 per cent of the total teaching force in the first cycle in 1965 and 16.2 per cent in 1970. While numbers are far greater in the second cycle, such staff are decreasing in relative terms (45.7 per cent in 1965 and 40.5 per cent in 1970). In Yugoslavia, the number of part-time teachers dropped appreciably between 1965 and 1970.

In short, omitting to take account of part-time staff has little effect on results (1) since their numbers are either stable, even declining, or they account for a very small proportion of total staff compared with full-time teachers. That being said, examination of Table 6 shows that the pupil/teacher ratio is tending to decline in general secondary education: the body of teachers available to the education system is therefore increasing more rapidly (or decreasing less rapidly) than the number of pupils attending school. At the end of the period, the ratio was smaller than it had been at the beginning of the previous period (cf. Note 2 to Table 6 for the few countries for which comparisons could be made). In view of these data and the pedagogical organisation of secondary education, it would be more instructive to study the trend in the average number of pupils per class. Unfortunately, very little relevant data are available.

In Germany, the average number of pupils per class is stable in the "Realschulen" (33); the same is true in the "Gymnasium" (28).

In France, the pupil/class ratio is tending to drop slowly but steadily in the "collèges d'enseignement général" (CEG); it dropped from 26.7 to 25.3 between 1965 and 1969 and from 30.4 to 28.2 during the same period in the general and technical long second cycle.

In Japan, the pupil/class ratio is still quite high, i.e. 37.0 in 1969. In the Netherlands, the average number of pupils per class in the second cycle is tending to increase; it was

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1) Denmark is a very special case, as already noted for primary education (cf. Notes to Table 5-II of Part Two).

22.0 in 1964 and 23.1 in 1967. However, these data cover too short a period and are too fragmentary to confirm a general trend.

In view of these data, however, it can be said that (apart from special country situations) the position has improved in relation to the trend recorded during the previous period. Nevertheless, the observation period is too short for this improvement to be considered an outright achievement. The demand factors are more complex at secondary level and variations in enrolments are less predictable.

2. Trends in the percentage of qualified teachers

Here, too, stress can only be laid on the inadequacy of available statistics. Data could be obtained on very few countries and then only over very short observation periods. The percentages of qualified teachers are not always known, although such percentages are usually lower for women than men, and the few data available confirm this trend. National, and therefore very heterogeneous, criteria are used to calculate the percentages of qualified teachers and their significance differs according to whether they relate to the second cycle only or to the whole of general education. Table 10 of Vol. V showed an improvement in the percentage of qualified teachers around the years 1960-1965 (1). The data shown in Table 7 of this report confirm this trend in most cases.

3. Trend in the percentage of women teachers in general secondary education

Previous studies ascertained a fairly general increase in the percentage of women teachers in the period 1950-1965 /cf. Volume V, op. cit., Table 26/. The available data on the current period are inadequate and not very homogeneous (2). In particular, the observation period is very short. However, Table 8 seems to indicate that this trend towards an increasing percentage of women teachers in secondary education has continued since 1965. As in the past, at the end of the period (differing according to country), the percentage of women among secondary school teachers remained lower than the percentage of women teachers in primary education.

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1) Where possible, comparison is made with the inverse proportions of the data in Table 10, Vol. V, op. cit. The definition of qualified staff differs in many cases.

2) See the basic tables.

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Table 7

TREND SINCE 1965 IN THE PERCENTAGE OF QUALIFIED TEACHERS
IN GENERAL SECONDARY EDUCATION IN SOME OECD COUNTRIES

	1965		1966		1967		1968		1969		1970	
	MF	F	MF	F	MF	F	MF	F	MF	F	MF	F
Denmark (1) (gymnasia)	72.7								71.1			
Spain (2) (public)	50.0	42.7	49.1	42.6			41.8					
(private)	53.3	55.7			55.9	59.9						
France (3) (classical, modern and technical lycées, public)	74.0										75.3	
Ireland (4)	63.7	56.0			61.5	55.8						
Italy (5)	47.2								50.5			
Japan (6) (second cycle general and technical)	69.4(7)								92.9			
Norway (8)	89.4	82.3									91.5	90.1
Netherlands (11) (second cycle)	23.0						21.8					
England-Wales (9) and	98.6	96.3							99.0	100.0		
Scotland (10) (public and grant-aided)			93.2	40.9							96.2	42.4

N.B. No data available for the following countries : Austria, Belgium, Canada, Finland, Germany, Iceland, Luxembourg, Portugal, Sweden, United States and Yugoslavia.

All teachers in public education in Greece are qualified. The same applies with regard to public and grant-aided education in Northern Ireland.

1) University graduates.
2) Established staff and official assistants.
3) All teachers, except headmasters.
4) Registered.
5) Established teachers and qualified ("abilitato") teachers among the non-established.
6) At least four years,university education.
7) 1964.
8) University and teacher training college graduates and other teachers with specific training.
9) Qualified primary and secondary teachers. cf. additional data, Table 20-II.
10) Certificated teachers.
11) Percentage of lessons taught by non-qualified staff.

Table 8

TREND IN PERCENTAGES OF WOMEN TEACHERS IN
GENERAL SECONDARY EDUCATION IN SOME OECD COUNTRIES

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		1950 (1)	1965 (1)	1965	1966	1967	1968	1969	1970
I. Countries for which comparisons can be made with the previous period									
Germany (2)	1st cycle	44	45	44.6					56.1
	2nd cycle	31	31	30.3					32.0
Spain (2)	Public	30	43	42.7		42.6			
	Private	35	39	39.8		39.2			
	Total	"	"	40.5		40.0			
France (2) (3) (public)	2nd cycle	47	52	52.6					53.6
Japan (3)	1st cycle	24	25	25.3					26.5
	2nd cycle	18	18	17.9				17.2	
	Total	"	"	22.1				22.2	
Northern Ireland (2)	1st cycle	44	48	47.5					50.9
	2nd cycle	49	46	42.1					45.8
	Total			45.2					46.8
II. Countries for which comparisons cannot be made with the previous period									
Austria (2)				37.1					41.3
Denmark (4)	2nd cycle				28.0				31.0
Finland (4)				58.2				50.6	
France (C.E.G.) (2) (public)				55.2					59.2
Ireland (4)				56.6		56.6			
Italy (2)				59.9			61.5		
Luxembourg				21.6					22.0
Norway (2)				28.3					31.8
Netherlands (4)	2nd cycle					21.0			22.3
Portugal (2) (public)					37.8				63.5
United Kingdom (5)						43.1		43.8	
England-Wales (2)				39.2					42.0
Sweden (3) (4)				43.3		46.4			
Yugoslavia (4) (public)	2nd cycle			43.8					43.4

N.B. These percentages have sometimes been calculated on different bases if the absolute number of teachers is unknown. Refer to the corresponding Basic Tables, Series II, for the exact representativeness of the data.

1) Or nearest year : cf. Table 26, Vol. V, op.cit.

2) Full time.

3) General and technical (full-time school attendance).

4) Full and part time.

5) Full time and full-time equivalent of part-time teachers in general and technical education.

Thus, in the light of the available data, it seems that the trend towards improvement initiatied in the years 1960-1965 is continuing, although the levels achieved prior to the crisis do not appear to have been reached or exceeded (except in Norway). Consequently, the possibility of an overall surplus at this level of teaching cannot be expected in the more or less short term (1). The 1969-1970 situation appears quite different from that in primary education, which is logical enough, as the shortage was felt later in secondary education, for which teacher training takes longer. Furthermore, by-subject statistics provide most information at this level of education, and such statistics are almost non-existent. It is therefore impossible to determine the real situation, as a favourable overall national pattern may conceal shortages or surpluses in specific fields. It would be even more valuable to have regular information from each country concerning the way in which requirements have been (or will be) satisfied in each field, as competition with other sectors of activity is keener in secondary education than in primary education and varies considerably according to the subject taught.

C. TECHNICAL SECONDARY EDUCATION

1. Statistical problems specific to this type of education

At the level of general secondary education, the use of statistics already gave rise to problems which made it difficult to determine recent trends, and such difficulties are even greater in the case of short or long technical education (i.e. providing access to higher education). Some countries could not be covered owing to the total absence or inadequacy of data on teachers (2) /Belgium, Denmark, Finland, Iceland, Ireland,

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1) In June, 1970, however, the United States announced a surplus (85,000) of new university graduates qualified to teach, although a shortage in rural areas and small towns was reported at the same time. Cf. Progress of Public Education in the United States of America 1969-1970, Report for the International Bureau of Education, Geneva.

2) In view of the importance of further education for the United Kingdom countries, specific tables have been drawn up for the United Kingdom, England and Wales, Scotland and Northern Ireland,[Series III(b)].

Luxembourg, Netherlands and Switzerland (1)7. In the case of the following countries, statistical data on technical education are combined with those on general education: Canada, France (long technical education), Japan (full-time technical education) Sweden and the United States. Furthermore, data covering long periods are very rare, which further restricts possibilities of analysis.

2. Comparative growth in numbers of pupils and teachers

In this connection, for a number of countries it is impossible to know whether the available data include part-time teachers (Portugal, Spain, Turkey) (2). In this case, it has been assumed that the data covered both full- and part-time teachers.

Five of the nine countries covered in Table 9 record an increase in the number of teachers equivalent to or higher than that of pupils. As already pointed out, it is almost as important to know the trend in average class size as in the number of teachers and, in the three countries for which these data were obtained, the average class size has remained stable as follows:

- In England and Wales, the average size of classes in public technical education was 21.7 pupils in 1965 and 20.8 in 1970;
- In Germany, in full-time vocational education (Berufsfachschulen), the average size of classes was 25 pupils in 1965 and 24 in 1968 and 1970;
- In France, in colleges of technical education (public), the average size of classes was 27.3 pupils in 1965 and 25.1 in 1969.

3. Percentage of women teachers in technical education

Table 10 shows the trend in the percentage of women teachers and indicates where the percentage is calculated on the basis of full-time teachers only. The significance of the percentage differs in relation to the basis of calculation where the proportion

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1) Cf. Basic Tables.

2) For information, it is noted that in Spain there is a greater increase in the number of teachers than pupils, only in long technical education. The same applies in Portugal for technical education as a whole and, more particularly, for public education. In Turkey, the number of teachers is increasing more quickly than that of pupils.

Table 9

COMPARATIVE GROWTH IN NUMBERS OF PUPILS AND TEACHERS IN TECHNICAL EDUCATION IN SOME OECD COUNTRIES

	School year beginning in :				
	1966 (1)	1967	1968	1969	1970
Germany (public and private)					
Berufsfachschulen					
Full-time pupils	107	122	124	123	126
Full-time teachers	95	124	134	136	138
Berufsschulen					
Part-time pupils	98	99	98	92	90
Full-time teachers	103	103	104	104	104
Fachschulen and Höhere Fachschulen					
Full-time pupils	94	97	101	107	101
Full-time teachers	96	99	101	103	91
Austria (2) (public and private)					
Full-time pupils	115	120	127	135	140
Full-time teachers	106	114	119		
Part-time teachers	129	130	127		
France (public) (3)					
Full-time pupils	106	117	132	135	136
Full-time teachers	107	115	133	151	160
Italy (public and private)					
Vocational institutes					
Full-time pupils	100	112	127	136	
Full-time teachers	101	107	113	129	
Part-time teachers	111	118	125	121	
Technical institutes					
Full-time pupils	107	108	110	114	
Full-time teachers	106	108	110	120	
Part-time teachers	103	109	101	97	
Total technical education					
Full-time pupils	106	109	114	119	
Full-time teachers	104	108	111	123	
Part-time teachers	107	114	114	110	
Japan (4) (public and private)					
Part-time pupils	99	93	86	79	
Full-time teachers	100	101	101	102	
Part-time teachers	96	95	90	94	
Norway (5) (public and private)					
Full-time pupils	104	108	113	117	123
Full-time teachers	106	113	116	123	132
Part-time teachers	106	111	114	114	126
England and Wales (6) (public and private)					
Full-time pupils	95	84	77	59	51
Full-time teachers	95	84	78	61	51
Northern Ireland (7) (public and grant-aided)					
Full-time pupils	85	72	52	27	14
Full-time teachers	78	62	60	30	
Yugoslavia (8) public					
Full-time pupils	98	96	93	93	96
Full-time teachers	97	97	90	81	76
Part-time teachers	104	96	62	78	78

1) 1965 = 100
2) Vocational and technical education, excluding apprenticeships.
3) Colleges of technical education.
4) Part-time second cycle education.
5) Total technical and vocational education.
6) Technical education.
7) Intermediate technical education.
8) Full-time education.

Sources : Basic Tables.

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Table 10

TREND SINCE 1965 IN THE PERCENTAGE OF WOMEN TEACHERS IN PUBLIC AND PRIVATE TECHNICAL SECONDARY SCHOOLS IN SOME OECD COUNTRIES

	School year beginning in :					
	1965	1966	1967	1968	1969	1970
I. Percentage based on the number of full-time teachers only						
Germany						
Part-time vocational (Berufsschulen)	30(1)				29	
Full-time vocational (Berufsfachschulen)	55				43.2	
Technical (Fachschulen Höhere Fachschulen)	46			40		
Austria - Vocational and technical education						
Full-time	37.9			41.2		
Part-time	39.1			32.8		
France - Colleges of Technical Education (public)	37.8					39.1
Greece						
Vocational schools			36.9		49.2	
Technical schools			39.2		9.8	
Italy (2)						
Vocational institues	41.5			41.7		
Technical institutes	44.5			41.3		
Japan (part-time education)	11.0				12.6	
Norway						
Full-time women teachers	23.2					26.3
United Kingdom (Further education)	14.5				14.8	
England-Wales - Further education	14.2				14.4	
Scotland - Further education (3)	26.6					20.9
Northern Ireland - Technical (public)			23.3			
Northern Ireland - Further education		29.8				28.4
II. Percentage based on total number of teachers						
Spain						
Industrial and commercial vocational training	4.4		6.2			
Technical baccalaureate	50.7		47.9			
Luxembourg - Vocational education (public)				15.2	15.3	
Portugal - Commercial and industrial schools						
Public	45.6					46.5
Private	29.5					38.8
England and Wales - Technical education	28.6					28.4
Turkey - Total technical secondary	40.3					32.2
Yugoslavia						
Vocational education (public)	20.2					25.6
Technical education (public)	40.3					44.7

1) Cf. Vol. V, op.cit, Table 27.

2) Excluding instructors for practical work.

3) Percentage based on full-time qualified teaching staff.

Sources : Basic Tables, Series III.

of part-time women teachers is relatively greater than elsewhere.

There was an increase in the proportion of women teachers during the previous period (cf. Volume V, op. cit., Table 27). A decline in the proportion of women teachers was recorded only in Turkey and Ireland. What has occurred since 1965? Once again, it is difficult to reach a conclusion as the observation period is much too short. In France and Norway there was a steady trend towards a greater number of women teachers, a trend that perhaps seemed all the sharper when compared with the data on the previous period. There are far more cases of lower percentages than in the previous period, but these may be temporary phenomena. Table 11 gives a long-term trend in percentages of women teachers (since 1950) for a few countries on which there are homogeneous data, and these confirm the data in the previous table. While the trend towards a higher percentage of women teachers (which emerged during the 1950-1965 period) has continued, there was some levelling off at the end of the period and a slight tendency for these percentages to drop.

It should be pointed out, moreover, that these very general data do not take account of the real situation. In fact, the percentage of women teachers differs considerably according to the type of education; it is very high (80 to 90 per cent) in commercial training or domestic science, and much lower in technical or industrial training. The data in the available official documents seldom have this degree of detail, and it therefore seemed pointless to review them at international level.

The percentage of women teachers often differs (not always, cf. Table 11) in relation to the level of education (long or short), but no specific pattern can be determined here and each country is an individual case.

4. Trend in the percentage of qualified teachers

Table 12 covers the few data collected on this subject. Past data are almost non-existent (cf. Vol.V, op.cit., Table 11). A long-term trend is available only in the case of France where, moreover, there has been a continuous drop in the percentage of qualified teachers. Percentages have been quite stable elsewhere since 1965. However, there is an appreciable steady increase in the percentage of qualified teachers in Norway. It will also be noted that the levels of the percentages are extremely varied.

Table 11

TREND BETWEEN 1950 AND 1970 IN THE PERCENTAGE OF WOMEN TEACHERS IN TECHNICAL EDUCATION IN SOME OECD COUNTRIES

	1950	1955	1960	1965	1966	1967	1968	1969	1970
Germany (public and private)									
Part-time vocational (Berufsschulen)	27	36	33	30				29	
Full-time vocational (Berufsfachschulen)	59	57	56	55				53.6	
Technical	-	-	44	46			40		
France - Colleges of Technical Education (public)			38	37.8					39.1
Greece (public and private)									
Vocational				34(1)				49.2	
Technical		3	3	6(1)				9.8	
Italy (public and private) (2)									
Vocational	22.5	42.5	40	41.5			41.7		
Technical	39.5	43.5	44.5	44.5			41.3		
Portugal (commercial and industrial schools) (3)									
Public	27		40	45.6					46.5
Private	-	-	-	29.5					38.8
England and Wales									
Technical (public)	30	31	30	28.6					28.4
Further education		15	14	14.2				14.4	
Northern Ireland - Further education	37	35	29	33	29.8				28.4
Turkey (public and private) (3)	35	35	30	40.3					37.2
Yugoslavia (public) (3)									
Skilled workers			20	20.2					25.6
Technical secondary			32	43.3					44.7

1) 1963.

2) Before 1965, cf. Study on Teachers - Italie, OECD, 1969, Table 38.

3) Full time and part time. In the case of the other countries, calculations are based on full-time teachers only.

Sources : Before 1965 : Vol. V, op.cit, Table 27. Only countries for which data were strictly comparable were selected.
After 1965 : Basic Tables, Series III.

Table 12

TREND IN THE PERCENTAGE OF QUALIFIED TEACHERS IN PUBLIC AND PRIVATE TECHNICAL SECONDARY EDUCATION IN SOME OECD COUNTRIES

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	School year beginning in :					
	1965	1966	1967	1968	1969	1970
Full time teachers only						
France : Colleges of Technical Education						
Men - Women	65.1					66.5
Women	53.2			52.4		
Italy						
Short-cycle education	80.3				86.8	
Long-cycle education	93.7				95.9	
Japan : Part time second-cycle education	95.8				96.7	
Luxembourg : Short-cycle education					72.2	
Norway : Total technical education						
Men - Women	82.0					85.1
Women	79.3					80.0
Full time and part time teachers						
Spain : Total technical education						
Men - Women	33.2		32.4			
Women	31.5		30.2			
Portugal (public)	76.4					77.5

Sources : Basic Tables, Series III.

For earlier data, cf. Vol. V, Part One, Table 11 (comparison should be made with the inverse proportions of the data given in the table).

This brief analysis highlights the scarcity of statistics on teachers in technical education where the inadequacy of data is even greater than elsewhere. It is therefore impossible to give details of the current trend as could be done in the case of primary education, in particular. (The possibilities of analysis are already more limited at the level of secondary education).

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These country studies appear in the following volumes
Netherlands - Portugal
Austria - Grèce - Sweden
Denmark - Italie - Luxembourg
Suisse - Yugoslavia
France - Ireland
Germany - Belgique - United Kingdom
A statistical annex is contained in one volume covering the following countries:
Canada - Espagne - Iceland - Japan - Norway - Turquie - United States.

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La formation des maîtres primaires, by Karl Frey, Conférence des directeurs des écoles normales de Suisse et Association pédagogique suisse, Geneva, 1969.

Part Two

STATISTICAL TABLES BY COUNTRY

FOREWORD

These tables cover primary, general secondary and technical secondary education only: unless otherwise stated, they do not cover pre-primary and special education or teacher training (secondary-level training of future primary school teachers).

This rule has not been followed in every case, either because the available statistics do not always make it possible to identify the staff assigned to a specific type of teaching, or because of the desire to maintain uniformity with previous studies, one of the aims of this study being to highlight the trends since 1965.

The following sources have been used in each case: either the individual country's regularly published official statistics on education or, where these are not available, the general statistical yearbooks. The data have been collected as from 1965 and, as far as possible, follow up the standardized tables in the statistical annex to the series of country case-studies: Etude sur les enseignants - Study on Teachers, OECD, Paris, 1968-1969. These country studies appear in the following volumes:

Netherlands - Portugal
Austria - Grèce - Sweden
Denmark - Italie - Luxembourg
Suisse - Yugoslavia
France - Ireland
Germany - Belgique - United Kingdom

There is a volume of statistics on the following countries: Canada - Espagne - Iceland - Japan - Norway - Turquie - United States.

The data in these studies, collected at five-yearly intervals, cover the period 1950-1965.

It will be noted that there is no case-study on Finland and no consolidated data for the United Kingdom prior to 1965.

A note to each table shows how data subsequent to 1965 may be linked up with earlier data. In some cases, however - Greece (partly), Iceland, Luxembourg, Norway, Sweden, Switzerland and

Turkey - the current series cannot be linked with the preceding one.

There has been no coverage of primary education in Switzerland due to the absence of available data; it was the same for general secondary education in Belgium and Switzerland.

In six countries, there has been no coverage of technical education either because data on teachers are not individualized (Canada, United States) or because these data are not available (Belgium, Netherlands, Switzerland) or because this type of education had not been dealt with previously (Denmark).

The collection of these statistics was governed by the following principles:

- Unless otherwise indicated in a note (Austria, for example), an attempt has always been made to set pupils alongside the corresponding teachers. Consequently, in view of the numbers of teachers available, data are often fragmentary as regards the level or type of education ; whenever possible, an attempt has been made to evaluate (note) the proportion of total enrolments in the relevant level or type of education represented by the number of pupils indicated.
- Where data are not very explicit, it is assumed that the number of teachers is assigned to the total number of pupils in the level or type of education in question.
- As each country is a special case as regards statistical deficiencies, the data are not comparable at international level, and are barely adequate for a study of trends (cf. Chapter II - Quantitative Aspect).
- In some cases, a past series (1950-1955) has been extended as it stands, even if fuller information has since been obtained. As the principal aim has been to determine recent trends in relation to the previous period, an attempt has been made to extend the case study data (but this has not always been possible) and, when forced to choose between fuller or uniform information, a uniform long-term series has been preferred.

This Part Two contains three series of tables:

- Series I for primary education, numbered from 1 to 26.
- Series II for general secondary education, numbered from 1 to 26.
- Series III for technical secondary education, numbered from 1 to 26.

As the study was written in French, the tables follow the

French alphabetical order of countries. It will be seen that these tables are standardized. Each is accompanied by a page of notes, sources and, in some cases, supplementary data intended to clarify the situation specific to each country.

Series I

PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

N.B. Table 24-I (Switzerland) is not given due to the absence of available data (see Foreword).

GERMANY
Table 1-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Full-time teachers and full-time equivalent of part-time teachers.
2) Volksschulen, i.e. primary school - in the strict sense - for a four-year period (Grundschulen) and the upper department of primary school (Hauptschulen - five years). The latter are gradually being phased out. The two levels of education are usually provided in the same school and the teaching staff have taken identical courses at teacher training colleges (excluding Hesse).
3) Cf. Study on Teachers - Germany, OECD, 1969, Table 6.
4) Excluding pre-primary and special classes and "Aufbauklassen" (intermediate classes attached to primary schools in some Länder).
5) The percentage of women teachers is calculated solely in relation to the number of full-time teachers on the basis of data in general statistical yearbooks.

Sources

"Lehrerbestand und Lehrerbedarf" I: Schüler-Klassen-Lehrer 1961 bis 1970. Ständige Konferenz der Kultusminister der Lander in der Bundesrepublik Deutschland, November, 1971, Tables B 3.1 and B 3.4.

Statistisches Jahrbuch für die Bundesrepublik Deutschland, from 1967 to 1971.

Supplementary Data

The average number of pupils per class in primary education as a whole decreased from 35.1 in 1965-66 to 33.8 in 1970-71. However, the current situation does not yet conform to the theoretical norms laid down in Germany, which are indicated in the OECD Study (Table 5) and have been used since 1963 to estimate teacher requirements. If an attempt is made to evaluate the theoretical shortage of teachers and classrooms in 1968-1969 on the basis of the mean values (OECD Study, Table 5), it can be said that 96.8 per cent of classroom requirements were covered and 91.5 per cent of teacher requirements.

The proportion of part-time teachers (converted into full-time equivalent) increased (5.9 per cent in 1966-67 to 6.8 per cent in 1970-71). At the same time, the number of hours taught by such staff also increased (index 100 in 1966 and 128 in 1970).

The number of part-time teachers increased slightly (index 100 in 1965 and 152 in 1969) and the percentage of women in the total increased from 37.8 per cent in 1965 to 42.6 per cent in 1969.

TABLE I - 1

GERMANY

PUPILS AND FULL-TIME[1] TEACHERS IN PRIMARY[2]
EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (3)	1966	1967	1968	1969	1970
Primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Upper primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils (4)	5 569 157	5 676 098	5 740 289	5 873 927	6 095 316	6 342 468
Indices	100	102	103	105	109	114
b. Teachers(4)	168 135	176 358	182 350	187 370	192 584	201 285
Indices	100	105	108	111	115	120
c. Pupil/teacher ratio (a : b)	33.1			31.3		31.5
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (5)	57.0			56.0		59.0
h. Qualified women teachers						
i. Percentage (h : f)						

AUSTRIA
Table 2-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Primary school (Volksschule)
   Upper primary school (Hauptschule)
   Special education (Sonderschule).

2) For the same year, cf.Study on Teachers - Austria, OECD, 1968, Annex II, Tables I and III. There is a slight difference for numbers of pupils, i.e. the OECD study gives 793,122 instead of 794,387.

3) Teachers in the strict sense, i.e. excluding teachers of religious instruction and instructors for practical work.

4) Teachers holding only the baccalaureate and those with no formal qualification are regarded as unqualified.

Sources

Österreichische Schulstatistik 1965-66 to 1970-71.

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TABLE 2 - 1

AUSTRIA

PUPILS AND FULL-TIME TEACHERS IN PRIMARY[1] EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965[2]	1966	1967	1968	1969	1970
Primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Upper primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	796 387	837 007	862 120	889 384	915 292	934 018
Indices	100	105	108	112	115	117
b. Teachers (3)	28 928	29 121	31 192	32 273	32 395	32 639
Indices	100	102	108	112	112	113
c. Pupil/teacher ratio (a : b)	27,5			27,6		27,2
d. Qualified teachers (4)	25 244	24 943	25 308	29 364	*	30 837
e. Percentage (d : b)	87,3			91,1		91,1
f. Women teachers	16 440	17 137	18 329	18 934	19 192	20 069
g. Percentage (f : b)	57,0			58,7		61,6
h. Qualified women teachers	14 199	14 220	14 608	15 369		18 228
i. Percentage (h : f)	86,3			80,1		90,8

BELGIUM
Table 3-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Covering only full-time staff.

2) Excluding pre-primary education.

3) 1964-65 is the latest year covered in the OECD Study, Study on Teachers - Belgique, OECD, 1969, Annex III. The number of teachers cited includes teachers in upper primary (4e degré).

4) Classroom teachers, directors, established teachers - both permanent and temporary.

5) Qualified teachers are those holding certificates from primary teacher training colleges ("instituteurs primaires"), certificates from middle-level teacher training colleges (régents) or both certificates. The percentage indicated here is calculated in relation to the total number of teachers (including headmasters with no classroom responsibilities) which was 48,720 in 1966. The unqualified (pre-primary school teachers, supplementary teachers and others) account for 1.1 per cent of classroom teachers.

6) 1971-72.

Sources

For 1965: Annuaire statistique de l'enseignement, Volume 10, school year 1965-66.

For 1966: Enquête sur l'expansion de l'enseignement : Country Replies - Belgique, Table II; Annuaire statistique de l'enseignement 1966-67.

For 1967: Population scolaire et universitaire, 1967-68, Institut national de la statistique, Documentation et programmation, ministère de l'éducation nationale.

Supplementary information supplied by the Pilot Centre for the Study of Educational Investments.

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TABLE 3 - 1

PUPILS AND FULL-TIME(1) TEACHERS IN PRIMARY(2) EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965(4)	1966	1967	1968	1969	1970(6)
Primary education						
a. Pupils	[illegible]	[illegible]	1 002 [illegible]	*	1 017 231	997 851
Indices	100	[illegible]	102		103	101
b. Teachers (3)	43 367	44 620	45 [illegible]	*	*	47 141
Indices	100	102	104			108
c. Pupil/teacher ratio (a : b)	22,4		[illegible]			21,1
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Upper primary education						
a. Pupils	18 334	[illegible]	12 445	*	8 005	6 722
Indices	100	81	70		43	36
b. Teachers	944	782	655	*	*	385
Indices	100	83	69			40
c. Pupil/teacher ratio (a : b)	19,4		18,7			17,4
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	997 969	1 003 610	1 015 556	*	1 025 236	1 004 573
Indices	100	100	101		102	100
b. Teachers (4)	44 505	45 402	45 995	*	[illegible]	47 526
Indices	100	102	103			106
c. Pupil/teacher ratio (a : b)	22,4		22,0			21,1
d. Qualified teachers (5)						
e. Percentage (d : b)		98,9	*			
f. Women teachers	24 478	25 371	25 325	*	*	*
g. Percentage (f : b)	55,0		55,3			
h. Qualified women teachers						
i. Percentage (h : f)						

CANADA
Table 4 - I and II

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY AND SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Full-time teachers (at least so far as public education is concerned).
2) For the same year, cf. Study on Teachers - Canada, OECD, 1969 - Statistical data, Tables 1, 2, 3 and 4.

3) Cf. "Canada 70" - Provisional data.
4) Including pre-primary classes but excluding special education.

Sources

Canada Yearbook 1968,1969 and 1970-71.

"Canada 70", Yearbook Division, Dominion Bureau of Statistics, Ottawa.

Statistiques de l'enseignement 1971-72: estimates for 1969-70

Supplementary Data

Primary and secondary education public and private

The percentage of women teachers totalled 64.8 per cent in 1965-66 and 62 per cent in 1966-67. In 1966-67, 15 per cent and 73 per cent of teachers (men and women) in primary and secondary education respectively were university graduates.

Primary, general secondary and vocational education

In 1967-68 15 per cent of elementary school teachers were university graduates (1.3 per cent held a Master's degree), as were 7.2 per cent of general secondary and vocational school teachers (7.2 per cent held a Master's degree). These proportions vary considerably according to the province. In the same year, moreover, two thirds of primary teachers and one third of general secondary and vocational school teachers were women.

Primary and general secondary education (public)

96 per cent of all pupils in primary schools and 92.7 per cent of those in secondary schools are receiving public education.

The trend in the percentage of women in the teaching body was as follows in 1965-66 and 1966-67 (excluding the Provinces of Quebec and Saskatchewan):

- Primary education: 75.8 per cent in 1965 and 77.2 per cent in 1966.
- Secondary education: 35.1 per cent in 1965 and 47.3 per cent in 1966.

The average length of service in the profession in terms of years of teaching was as follows in 1966-67:

- Primary education: 5.6 for men and 6.9 for women.
- Secondary education: 7 for men and 8.6 for women.

Other sources: A.G. Atkinson, K.J. Barnes and Ellen Richardson, "Canada's Highly Qualified Manpower Resources", Research Branch Programme Development Service, Department of Manpower and Immigration, Ottawa, 1970, pp. 168 to 178.

Table 4 - 1 AND II

CANADA

PUPILS AND FULL-TIME[1] TEACHERS IN PRIMARY
AND SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965[2]	1966	1967	1968[3]	1969	1970
Primary education[4]						
a. Pupils	3 922 337	4 023 960	4 127 778	*	4 056 179	4 060 154
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education						
a. Pupils	1 205 386	1 264 719	1 327 027	*	1 690 763	1 758 023
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary and secondary						
a. Pupils	5 127 723	5 288 679	5 454 805	5 532 130	5 745 942	5 818 177
Indices	100	103	106	108	112	113
b. Teachers	210 102	232 434	239 127	263 485	260 727	264 568
Indices	100	111	113	125	124	125
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	136 227					
g. Percentage (f : b)	64,8					
h. Qualified women teachers						
i. Percentage (h : f)						

DENMARK
Table 5-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) All teachers, regardless of the number of teaching hours per week. The concept of full-time or part-time has no relevance in Denmark as indicated by the percentage breakdown of teachers based on the number of hours per week in 1967-68.

	Less than compulsory hours 01 to 31	Compulsory hours 32	Overtime 01 to 20	Total
Men	5.6	8.5	85.9	100
Women	30.3	18.0	51.7	100
Total	17.9	13.3	68.8	100

2) Namely the Borneskolen (excluding gymnasia) which here group together municipal and state schools for public education, middle-level schools (Realskolen) and girls' schools (Friskolen) for private and special education (see the sources for the specific tables).

3) For the same year, cf. Study on Teachers - Denmark, OECD, 1968, Table 8, p. 35.
Although numbers of teachers are the same, the numbers of pupils differ somewhat.

4) These are graduates of teacher training colleges.

Sources

Undervisnings Ministeriet Statistik - Folkeskolen 1965-66, Tables 1.12 and 7.21 and the same tables in the sections on 1966-67, 1967-68, 1968-69 and 1970-71 (Tables 1.11, 2.21.2 and 2.21.3).
Same source, section on 1967-68, Table 2.52.

Supplementary Data

The percentage of qualified teachers is higher in public than in private education. In public education, it rose from 88.6 per cent in 1965-66 to 94.2 per cent in 1970-71, whereas in private education it fell from 45.7 to 45 per cent over the same period.

The trend in the pupil/qualified teacher ratio was as follows between 1965-66 and 1967-68: in public education it dropped from 21 to 19.5 and in private education it increased from 20.4 to 25.

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DENMARK

Table 5 - 1

PUPILS AND FULL-TIME TEACHERS[1] IN PRIMARY[2] EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965	1966[3]	1967	1968	1969	1970
Primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Upper primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	653 739	657 526	665 338	673 996	679 095	690 368
Indices	100	100	101	103	104	105
b. Teachers	36 390	36 585	38 318	39 919	41 077	41 853
Indices	100	100	105	109	112	115
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers[4]	30 490	31 195	32 956	34 927	36 088	37 549
e. Percentage (d : b)	83,7			87,4		89,7
f. Women teachers	18 055	18 208	19 193	20 215	*	*
g. Percentage (f : b)	49,6			50,6		52,7
h. Qualified women teachers	14 520	14 945	15 916	17 164	*	*
i. Percentage (h : f)	80,4			84,9		

SPAIN
Table 6-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) All teachers are employed on a full-time basis.

2) For the same year, cf. Study on Teachers - Espagne, OECD, 1969 - Statistical data, Tables 1(a) and 2.

3) Pre-primary and primary education.

4) Teachers are appointed after a competitive examination taken on qualification. Thus, all candidates have the required qualifications and have attended teacher training colleges irrespective of whether they subsequently become established teachers or not; the figures given include both teachers and headmasters.

Sources

"Estadistica de la Enseñanza primaria" for the years under consideration.

Annuario estadistico 1970.

Table 6 - 1

SPAIN

PUPILS AND FULL-TIME TEACHERS[1] IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (2)	1966	1967	1968	1969	1970
Primary education						
a. Pupils	3 331 566	3 380 218	3 503 637	3 664 823	3 789 135	
Indices						
b. Teachers	*	*	*	*	*	
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Upper primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education (3)						
a. Pupils	3 942 193	4 025 244	4 178 686	4 390 000	4 555 361	
Indices	100	102	106	111	115	
b. Teachers	113 515	117 067	122 775	*	129 244	
Indices	100	103	108		113	
c. Pupil/teacher ratio (a : b)	34.7		34.0		35.2	
d. Qualified teachers (4)						
e. Percentage (d : b)						
f. Women teachers	72 009	74 551	78 167	*	82 967	
g. Percentage (f : b)	63.4		63.7		64.1	
h. Qualified women teachers						
i. Percentage (h : f)						

UNITED STATES
Table 7-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Both full-time and part-time teachers. The latter accounted for 5 per cent of the total in 1965. In calculating the pupil/teacher ratios, it is assumed that all teachers are on a full-time basis and that the percentage of part-time teachers has remained stable.

2) For the same year, cf. Study on Teachers - United States, OECD, 1969, Statistical data, Tables 1(a) and 2. The data given in the OECD Study were provisional, which explains the disparities to be noted here.

3) Including pupils at pre-primary schools attached to primary schools, but this excludes any form of education outside the normal system (independent pre-primary schools, for instance).

4) Including the increase in the number of teachers as a result of the 1965 Act on primary and secondary education.

5) Estimates.

Sources

"Projections of Educational Statistics to 1977-1978", Tables 3, 23 and 24 up to 1968.

"Digest of Educational Statistics" 1968, 1969, 1970.

Supplementary Data

In public education, the typical teacher at the first level has the following characteristics: 40 years of age, holds a Bachelor's degree (two years of university studies) and in 1.5 cases out of 10 a higher degree, has ten years' experience, spends an average of 30 hours per week with a class of 29 pupils and has a working week of 46.5 hours.

In nine cases out of 10 the teacher will be a woman, and in six cases out of ten a married woman.

Other Sources: "Research Report 1967, R.4, The American School Teacher", Research Division, National Education Association, p. 58. Survey data: 2,344 replies broken down as follows: 52 per cent primary, 48 per cent secondary, 31 per cent men, 69 per cent women (of whom 45 per cent were married).

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Table 7 - 1

UNITED STATES OF AMERICA

PUPILS AND FULL-TIME TEACHERS(1) IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965(2)	1966	1967	1968	1969	1970(5)
Primary public education						
a. Pupils(3)	26 670 000	27 105 000	27 381 000	27 418 423	27 455 152	27 269 000
Indices	100	102	103	103	103	102
b. Teachers(4)	965 000	1 006 000	1 040 000	1 079 253	1 107 774	1 115 000
Indices	100	104	108	112	115	116
c. Pupil/teacher ratio (a : b)	27.6		26.3			24.5
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Non public primary education						
a. Pupils(3)	4 900 000	4 700 000	4 600 000	4 500 000	4 300 000	4 200 000
Indices	100	96	94	92	88	86
b. Teachers(4)	158 000	153 000	153 000	155 000	150 000	146 000
Indices	100	97	97	98	95	92
c. Pupil/teacher ratio (a : b)	31.0		30.1			29.0
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils(3)	31 570 000	3 180 500	31 981 000	31 918 423	31 755 152	31 469 000
Indices	100	101	102	101	101	100
b. Teachers(4)	1 123 000	1 159 000	1 193 000	1 234 253	1 257 774	1 261 000
Indices	100	103	106	110	112	112
c. Pupil/teacher ratio (a : b)	28.1		26.8			25.0
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						

FINLAND
Table 8-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Namely, regular primary schools and upper primary schools (continuation schools). Auxiliary and special schools are excluded. The number of pupils shown represents about 98.5 per cent of total school attendance at this level.

2) Regular primary schools.

3) Figure obtained by deducting "unqualified" teachers shown in the statistical yearbook.

4) Primary continuation schools.

Sources

"Statistical Yearbook of Finland", 1969 and 1970.

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Table 8 - 1

FINLAND

PUPILS AND FULL-TIME TEACHERS IN PRIMARY[1] EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965	1966	1967	1968	1969	1970
Primary education[2]						
a. Pupils	460 012	438 057	422 584	407 050	393 942	
Indices	100	95	92	88	85	
b. Teachers	19 899	19 177	18 531	18 057	17 752	
Indices	100	96	93	91	89	
c. Pupil/teacher ratio (a : b)	23.1		22.8		22.1	
d. Qualified teachers (3)			18 276			
e. Percentage (d : b)			98.6			
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Upper primary education[4]						
a. Pupils	84 035	85 436	83 934	82 492	80 357	
Indices	100	102	100	98	95	
b. Teachers	3 983	4 251	4 268	4 261	4 238	
Indices	100	107	107	107	106	
c. Pupil/teacher ratio (a : b)	21.1		19.6		12.9	
d. Qualified teachers (3)			3 616			
e. Percentage (d : b)			84.7			
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	544 047	523 493	506 518	489 542	474 299	
Indices	100	96	93	90	87	
b. Teachers	23 882	23 428	22 799	22 318	21 990	
Indices	100	98	95	93	92	
c. Pupil/teacher ratio (a : b)	22.8		22.2		21.5	
d. Qualified teachers (3)	22 439	22 308	21 892	21 504	21 142	
e. Percentage (d : b)	94.0		96.0		96.1	
f. Women teachers	14 516	14 127	13 736	13 322	13 130	
g. Percentage (f : b)	60.8		62.2		59.7	
h. Qualified women teachers						
i. Percentage (h : f)						

FRANCE
Table 9-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PUBLIC PRIMARY EDUCATION

Notes

1) Five-year elementary cycle and the terminal classes which are being phased out.

2) For the years prior to 1965, cf. Study on Teachers - France, OCDE, 1969 - Annex III, Tables I(a) and III(a). The latest year covered is 1964-65. The figure given for teachers in the OECD Study is 179,919 (estimate based on the number of classes) which differs slightly from the figure of 180,357 given for the same year in the "Tableaux de l'Education nationale" 1958-1968.

3) Excluding Paris.

Sources

Tableaux de l'Education nationale, 1958-1968.

Note d'information No. 43, January, 1970, Ministère de l'Education nationale, Service central des statistiques et de la conjoncture.

Statistiques de l'enseignement; tableau et informations No. 4 (June, 1972) and No. 7 (September 1972).

Supplementary Data

The proportion of women teachers in primary education is always higher than 50 per cent, but it varies according to the educational district. In 1968-69, it was 75.2 per cent in the Paris district and 55.9 per cent in the Lille district.

Other Sources: Ministère de l'Education nationale, Service central des statistiques et de la conjoncture, Document No. 3775, "Proportion du personnel féminin dans l'enseignement du premier degré, 1968-69".

TABLE II - 1

FRANCE

PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC(1)

School year beginning in :	1965(2)	1966	1967	1968	1969	1970
Primary education						
a. Pupils	4 715 146	4 652 680	4 589 060	4 448 205	4 322 296	4 253 550
Indices	100	99	97	94	92	90
b. Teachers	180 023	177 800	177 777	182 779	183 850	183 049
Indices	100	99	99	101	102	101
c. Pupil/teacher ratio (a : b)	26.2			24.3		23.2
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	117 120	115 974	118 003	121 689	123 625	
g. Percentage (f : b)	65.1			66.5		67.5(3)
h. Qualified women teachers						
i. Percentage (h : f)						
Upper primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	4 715 146	4 652 680	4 589 060	4 448 205	4 322 296	4 253 550
Indices	100	99	97	94	92	90
b. Teachers	180 023	177 800	177 777	182 779	183 850	183 049
Indices	100	99	99	101	102	101
c. Pupil/teacher ratio (a : b)	26.2			24.3		23.2
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	117 120	115 974	118 003	121 689	123 625	
g. Percentage (f : b)	65.1			66.5		67.5(3)
h. Qualified women teachers						
i. Percentage (h : f)						

GREECE
Table 10-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) All teachers are qualified.

2) There are no part-time teachers.

3) For the years prior to 1965, cf. Study on Teachers - Grèce, OECD, 1968 - Annex II, Tables I (a and b) and III. The latest year covered is 1962-63, since when the series has been coordinated.

Sources

Education statistics for the relevant years.

Statistical Yearbook of Greece.

Table II.1

PUPILS AND FULL-TIME(2) TEACHERS(1) IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (3)	1966	1967	1968	1969	1970
Public primary education						
a. Pupils	902 290	905 077	899 877	885 942	872 608	
Indices	100	100	100	98	96	
b. Teachers	25 246	26 310	25 737	25 962	25 699	
Indices	100	[illegible]	102	103	101	
c. Pupil/teacher ratio (a : b)	35.7		35.0		34.0	
d. Qualified teachers (1)						
e. Percentage (d : b)						
f. Women teachers	11 385	12 207	11 856	12 069	11 974	
g. Percentage (f : b)	45.1		46.1		46.5	
h. Qualified women teachers						
i. Percentage (h : f)						
Private primary education						
a. Pupils	61 366	63 816	64 351	62 353	65 238	
Indices	100	104	105	101	106	
b. Teachers	2 130	2 214	2 226	2 230	2 429	
Indices	100	104	104	104	114	
c. Pupil/teacher ratio (a : b)	28.8		28.9		26.9	
d. Qualified teachers (1)						
e. Percentage (d : b)						
f. Women teachers	1 167	1 239	1 234	1 215	1 331	
g. Percentage (f : b)	54.8		55.4		54.7	
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	963 656	968 893	964 228	948 295	937 846	
Indices	100	100	100	98	97	
b. Teachers	27 376	28 524	27 963	28 192	28 128	
Indices	100	104	102	103	103	
c. Pupil/teacher ratio (a : b)	35.2		34.5		33.3	
d. Qualified teachers (1)						
e. Percentage (d : b)						
f. Women teachers	12 552	13 446	13 090	13 284	13 305	
g. Percentage (f : b)	45.8		46.8		47.3	
h. Qualified women teachers						
i. Percentage (h : f)						

IRELAND
Table 11-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Both full-time and part-time, so pupil/teacher ratios are not calculated.

2) This covers national schools and special education is included.

3) For the same year, cf. Study on Teachers - Ireland, OECD, 1969 - Statistical Annex, Tables 1 and 8: the numbers of pupils do not agree exactly, as the OECD Study shows 506,225 instead of 493,229.

4) According to the sources used these are "trained" teachers.

Sources

Statistical Abstract of Ireland, 1968 and 1969.

Supplementary Data

In addition, there are some so-called "supernumerary" teachers, mainly members of religious orders, who hold teaching posts that are not on the normal establishment and they are not paid by the State. There were 369 of these teachers in 1965 and 317 in 1966. In 1966, 98.7 per cent of all supernumeraries were women.

IRELAND

Table II - 1

PUPILS AND FULL-TIME TEACHERS[1] IN PRIMARY EDUCATION, PUBLIC[2] AND PRIVATE

School year beginning in :	1965[3]	1966	1967	1968	1969	1970
Primary education						
a. Pupils	493 229	496 516	493 549			
Indices	100	101	100			
b. Teachers	14 614	14 686	14 737			
Indices	100	100	101			
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers[4]	12 756	12 946	13 192			
e. Percentage (d : b)	87.3		89.5			
f. Women teachers	10 066	10 156	10 139			
g. Percentage (f : b)	69.0		68.7			
h. Qualified women teachers	8 418	8 631	8 812			
i. Percentage (h : f)	83.6		86.9			
Upper primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	493 229	496 516	493 549			
Indices	100	101	100			
b. Teachers	14 614	14 686	14 737			
Indices	100	100	100			
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers[4]	12 756	12 946	13 192			
e. Percentage (d : b)	87.3		89.5			
f. Women teachers	10 066	10 156	10 139			
g. Percentage (f : b)	69.0		68.7			
h. Qualified women teachers	8 418	8 631	8 812			
i. Percentage (h : f)	83.6		86.9			

ICELAND
Table 12-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Both full-time and part-time teachers.

2) For the same year, cf. Study on Teachers - Iceland, OECD, 1969 - Statistical data, Tables 1 and 2. The data on these teachers are not comparable. Table 1 of the OECD Study includes full-time teachers only.

3) 1971/1972 for pupils.

Sources

"Yearbook of Nordic Statistics"

1967 : Table 118

1969 : Tables 136 and 138

1970 : Table 140

1971 : Table 146

1972 : Tables 157 and 158.

Table 12 - 1

ICELAND

PUPILS AND FULL-TIME(1) TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965(2)	1966	1967	1968	1969	1970 (3)
Primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Upper primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	25 370	26 000				27 200
Indices	100	102				107
b. Teachers	1 193	1 267	1 339	1 352	1 361	1 545
Indices	100	106	112	113	114	129
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						

ITALY
Table 13-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) There are no part-time teachers.

2) Excluding pre-primary and special education.

3) For the years prior to 1965, cf. Study on Teachers - Italie, OECD, 1968 - Annex II, Tables I and III. The latest year covered is 1963-64.

4) All teachers are qualified, i.e. graduates of teacher training colleges, but they are not all established staff (see below).

5) There are no data available on the qualifications of private primary school teachers. In 1968-69, 52.8 per cent of the teachers in such schools were members of religious orders.

Sources

"Annuario statistico dell'istruzione italiana" from 1965 to 1971.

Supplementary Data

In 1968-69, established teachers in public education totalled 191,582. The proportion of established teachers in the total teaching body in private primary education rose slightly from 92.9 per cent in 1965-66 to 95.2 per cent in 1968-69.

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Table 13 - I

ITALY

PUPILS AND FULL-TIME TEACHERS(1) IN PRIMARY(2) EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965(3)	1966	1967	1968	1969	1970
Public primary education						
a. Pupils	4 142 439	4 186 175	4 258 478	4 319 121	4 396 543	
Indices	100	101	103	104	106	
b. Teachers	190 745	194 047	197 917	201 311	205 114	
Indices	100	102	104	105	107	
c. Pupil/teacher ratio (a : b)	21.7		21.5		21.4	
d. Qualified teachers(4)						
e. Percentage (d : b)	100		100		100	
f. Women teachers	139 690	143 626	147 810	152 078	156 140	
g. Percentage (f : b)	73.2		74.6		76.1	
h. Qualified women teachers (4)						
i. Percentage (h : f)	100		100		100	
Private primary education						
a. Pupils	337 768	338 936	335 555	332 972	334 923	
Indices	100	100	99	98	99	
b. Teachers	12 058	12 088	12 000	12 026	12 104	
Indices	100	100	99		100	
c. Pupil/teacher ratio (a : b)	28.0		27.9		27.6	
d. Qualified teachers(5)						
e. Percentage (d : b)						
f. Women teachers	11 260	11 924	11 297	11 294	11 401	
g. Percentage (f : b)	93.4		94.1		94.1	
h. Qualified women teachers(5)						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	4 480 207	4 525 111	4 594 033	4 652 093	4 731 466	
Indices	100	101	102	104	105	
b. Teachers	202 803	206 135	209 917	213 337	217 218	
Indices	100	102	103	105	107	
c. Pupil/teacher ratio (a : b)	22.1		21.8		21.7	
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	150 950	154 920	159 107	163 372	167 541	
g. Percentage (f : b)	74.4		75.7		77.1	
h. Qualified women teachers						
i. Percentage (h : f)						

JAPAN
Table 14-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) For the same year, cf. Study on Teachers - Japan, OECD, 1969 - Statistical data, Tables 2 and 5.

2) Owing to a lack of more specific data, both teachers and assistants are covered.

3) Excluding pre-primary schools and special education.

Sources

Annual Report of the Ministry of Education 1965, 1966, 1967 and 1968-70.

Japanese Statistical Yearbook 1969.

Outline of Education in Japan, March, 1970, Agency for Cultural Affairs, Government of Japan.

Supplementary Data

The trend in part-time teaching staff has been as follows: 1965-66: 2,269, 1970-71: 1,915.

The trend in the number of pupils per class has been since 1958 as follows: 1958: 50; 1963: 45; 1969: 33.

The teacher's average working week totals 34.4 hours, of which 24.4 hours of teaching.

The trend in the level of training between 1965-66 and 1968-69 was as follows:

The proportion of teachers with at least four years' university education was 17.2 per cent in 1965 and 24.1 per cent in 1968.

The proportion of teachers with 2 or 3 years' university education was 56 per cent in 1965 and 59.8 per cent in 1968.

In view of this situation, the standard training pre-requisites are: Second-class teachers: 2 years of training beyond the second cycle of secondary education; First-class teachers: 2 years of university education (Bachelor's degree).

Other Sources: Interim Report on Fundamental Policies and Measures for the Overall Expansion and Development of School Education in the Future, 30th June, 1969, Ministry of Education in Japan.

Table 14 - 1

JAPAN

PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (1)	1966	1967	1968	1969	1970
Primary education						
a. Pupils	9 775 532	9 584 061	9 452 071	9 383 182	9 403 193	9 493 485
Indices	100	98	96	95	96	97
b. Teachers	345 118	347 438	351 426	356 012	361 149	367 940
Indices	100	100	102	103	104	106
c. Pupil/teacher ratio (a : b)	28.3			26.4		25.8
d. Qualified teachers(2)	311 717	314 295	317 181	321 044	325 498	331 353
e. Percentage (d : b)	90.3			90.1		90.0
f. Women teachers	166 900	168 772	172 398	176 653	182 524	187 321
g. Percentage (f : b)	48.3			49.6		50.9
h. Qualified women teachers						
i. Percentage (h : f)						
Upper primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education(3)						
a. Pupils	9 775 532	9 584 061	9 452 071	9 383 182	9 403 193	9 493 485
Indices	100	98	96	95	96	97
b. Teachers	345 118	347 438	351 426	356 012	361 149	367 940
Indices	100	100	102	103	104	105
c. Pupil/teacher ratio (a : b)	28.3			26.4		25.8
d. Qualified teachers(2)	311 717	314 295	317 181	321 044	325 498	331 353
e. Percentage (d : b)	90.3			90.1		90.0
f. Women teachers	166 900	168 772	172 398	176 653	182 524	187 321
g. Percentage (f : b)	48.3			49.6		50.9
h. Qualified women teachers						
i. Percentage (h : f)						

LUXEMBOURG
Table 15-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) It is assumed that there are no part-time teachers.

2) Normal primary education (6 years), upper primary education, complementary courses (3 years) and special education.

3) For the years prior to 1965-66, cf. Study on Teachers - Luxembourg, OECD, 1968 - Annex I, Tables I and III. The latest year covered is 1963-64.

4) The teachers in question hold the following certificates:

   Teacher's training certificate ("brevet d'aptitude pédagogique");

   Pre-primary teacher's certificate ("brevet d'enseignement préscolaire");

   Upper-primary teacher's certificate ("brevet d'enseignement primaire supérieur");

   Kindergarten teacher's certificate ("brevet de maîtresse de jardins d'enfants").

5) Covering the same teachers as above, plus holders of the domestic science and home economics teacher's certificate("brevet de maîtresse d'enseignement ménager et ménager familial") and handwork teacher's certificate("brevet de maîtresse d'ouvrage manuel").

Sources

Courrier de l'Education nationale, December 1970, No. B 9/70; and 1971 Series.

Table 15 - 1

PUPILS AND FULL-TIME TEACHERS[1] IN PRIMARY[2]
EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965[3]	1966	1967	1968	1969	1970
Public primary education						
a. Pupils	34 951	35 063	35 173	34 462	34 542	34 540
Indices	100	100	101	99	99	99
b. Teachers	1 399	1 471	1 511	1 490	1 525	1 561
Indices	100	105	108	106	109	111
c. Pupil/teacher ratio (a : b)	25.0		23.3			22.1
d. Qualified teachers[4]					1 475	1 518
e. Percentage (d : b)						97.2
f. Women teachers	695	729	726	737	774	777
g. Percentage (f : b)	50.0		48.0			49.7
h. Qualified women teachers						
i. Percentage (h : f)						
Private primary education						
a. Pupils	1 558	1 534	1 452	1 031	1 119	956
Indices	100	98	93	66	72	61
b. Teachers	59	60	61	*	62	44
Indices	100	102	103		105	74
c. Pupil/teacher ratio (a : b)	26.4		23.8			21.7
d. Qualified teachers[5]					37	26
e. Percentage (d : b)						59.0
f. Women teachers					56	37
g. Percentage (f : b)						84.0
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	36 509	36 597	36 625	35 493	35 661	35 496
Indices	100	100	100	97	98	97
b. Teachers	1 458	1 531	1 572		1 587	1 605
Indices	100	105	108		109	110
c. Pupil/teacher ratio (a : b)	25.0		23.3			22.1
d. Qualified teachers					1 512	1 544
e. Percentage (d : b)						96.1
f. Women teachers					830	814
g. Percentage (f : b)						50.7
h. Qualified women teachers						
i. Percentage (h : f)						

NORWAY
Table 16-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PUBLIC PRIMARY EDUCATION

Notes

1) Full-time only (see below for part-time teachers).

2) Lower department of primary schools.

3) Namely, university graduate teachers, graduates of teacher training colleges and specialist teachers who have received adequate training.

4) Continuation schools, which are gradually being abolished.

5) For the same year, cf. Study on Teachers - Norway, OECD, 1969 - Statistical data, Tables 1 and 4.

6) Incomplete data.

Sources

Undervisningsstatistikk - Statistisk sentralbyrån, Oslo, for 1965, 1966, 1967, 1969 and 1970.

Supplementary Data

The trend in the number of part-time teachers in public education has been as follows : 2,867 in 1965 (15.2 per cent of the total) and 2,934 in 197[illegible] (15.8 per cent of the total). Most part-time teachers are women ([illegible]5 per cent in 1970).

Table II - 1

NORWAY

PUPILS AND FULL-TIME TEACHERS(1) IN PRIMARY EDUCATION, PUBLIC

School year beginning in :	1965 (5)	1966	1967	1968 (6)	1969	1970
Primary education(2)						
a. Pupils	410 480	405 321	402 177	385 485	388 302	383 939
Indices	100	99	98	93.9	94	93
b. Teachers	16 892	16 887	17 117	16 900	16 763	16 797
Indices	100	100	101	100	99	99
c. Pupil/teacher ratio (a : b)	24.3			22.8		22.8
d. Qualified teachers(3)	14 804	15 078	15 575	*	15 873	16 011
e. Percentage (d : b)	87.6		91.0			95.3
f. Women teachers	9 158	9 269	9 482	9 507	9 478	9 581
g. Percentage (f : b)	54.2			56.2		57.0
h. Qualified women teachers	7 898	8 174	8 534	*	8 963	9 123
i. Percentage (h : f)	86.2		90.0			95.2
Upper primary education(4)						
a. Pupils	30 838	26 108	22 721	19 404	14 664	9 595
Indices	100	84	73	62	47	31
b. Teachers	1 940	1 554	1 413	1 181	892	581
Indices	100	80	73	61	45	30
c. Pupil/teacher ratio (a : b)	15.9			16.4		16.5
d. Qualified teachers (3)	1 556	1 286	1 186	*	747	506
e. Percentage (d : b)	80.2		83.9			87.0
f. Women teachers	618	481	458	370	272	174
g. Percentage (f : b)	31.8			31.3		29.9
h. Qualified women teachers	458	367	365	*	217	145
i. Percentage (h : f)	74.1		79.6			83.3
TOTAL primary education						
a. Pupils	441 318	431 429	424 898	404 889	405 065	393 534
Indices	100	98	96	91	91	89
b. Teachers	18 832	18 441	18 590	18 081	17 655	17 378
Indices	100	97.9	98	96	93	92
c. Pupil/teacher ratio (a : b)	23.4			22.3		22.6
d. Qualified teachers (3)	16 360	16 364	16 761	*	16 620	16 517
e. Percentage (d : b)	86.8		90.1			95.0
f. Women teachers	10 076	9 750	9 940	9 877	9 750	9 755
g. Percentage (f : b)	53.5			54.6		56.1
h. Qualified women teachers	8 356	8 541	8 899		9 180	9 268
i. Percentage (h : f)	82.9		89.5			95.0

NETHERLANDS
Table 17-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Cf. Study on Teachers-Netherlands, OECD, 1968 - Annex IV, Tables I and III. The latest year covered is 1966-67.

2) Gradually being abolished (vglo); absence of data from 1969 onwards.

Sources

Centraal Bureau Voor de Statistick, Statistics on primary and upper primary schools, 1967-68.

Report of the Government of the Netherlands on the Development of Education in 1968, 1969, 1970, Vol.2. Ministry of Education and Sciences, Documentation Department, The Hague.

Supplementary Data

As regards qualifications, all teachers in fact have been both the requisite general training and a specialisation (modern languages, mathematics, handicrafts, physical education) which qualifies them to teach in that field. It is in this connection that the question of "unqualified" may arise insofar as some teachers teach subjects in which they have not had special training. In 1965-66, for example, the situation in primary and upper primary education was as follows:

Subjects	Number of unqualified teachers	
	Primary education	Upper primary education
French	4	5
German	2	4
English	4	8
Mathematics	1	1
Economics	1	5

Other Sources: Statistics on Certificates held by Teachers in the Primary and Secondary Modern Schools in 1965. Netherlands Centraal Bureau of Statistics.

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Table 12 -

NETHERLANDS

PUPILS AND FULL-TIME TEACHERS IN PRIMARY
EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965	1966 (1)	1967	1968	1969	1970
Primary education (gld)						
a. Pupils	1 409 817	1 418 565	1 427 966	1 438 831	1 450 647	1 462 376
Indices	100	101	101	102	103	103
b. Teachers	44 996	45 434	46 008	46 458	47 841	49 243
Indices	100	101	102	103	106	109
c. Pupil/teacher ratio (a : b)	31.3			31.0		29.7
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	23 229	23 305	23 188	23 451	24 207	24 353
g. Percentage (f : b)	51.6			50.4		49.4
h. Qualified women teachers						
i. Percentage (h : f)						
Upper primary education(2)						
a. Pupils	38 995	38 508	37 822	30 401		
Indices	100	99	97	78		
b. Teachers	1 670	1 639	1 613			
Indices	100	98	97			
c. Pupil/teacher ratio (a : b)	23.3		23.4			
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	835	790	720			
g. Percentage (f : b)	50.0		44.6			
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	1 448 012	1 457 173	1 465 788	1 469 232		
Indices	100	101	101	101		
b. Teachers	46 666	47 273	47 621			
Indices	100	101	102			
c. Pupil/teacher ratio (a : b)	31.0		31.0			
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	24 064	24 095	23 908			
g. Percentage (f : b)	51.6		50.2			
h. Qualified women teachers						
i. Percentage (h : f)						

PORTUGAL
Table 18-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) There are no part-time teachers.

2) For the years prior to 1965-66, cf. Study on Teachers - Portugal, OECD, 1968 - Annex II, Tables I, II and III.

3) Teachers with certificates from secondary-level teacher training colleges ("professores").

4) The numbers of pupils include those taught in schools and in individual and domestic education. On the other hand, only teachers teaching in private schools are covered.

5) Professional training is not required at this level. In principle, all teachers hold the requisite academic qualifications. However, the State authorises private education to use other criteria as a basis for the recruitment of up to 25 per cent of the total teaching staff.

Sources

"Estatisticas da educaçao", and

"Annuario estatistico" for the years under consideration.

Table 18 - 1

PORTUGAL

BEST COPY AVAILABLE

PUPILS AND FULL-TIME TEACHERS[1] IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965[2]	1966	1967	1968	1969	1970
Public primary education						
a. Pupils	847 108	843 926	856 982	912 298	937 758	939 999
Indices	100	100	101	108	110	111
b. Teachers	25 971	25 705	26 421	27 232	27 664	27 460
Indices	100	99	102	105	106	105
c. Pupil/teacher ratio (a : b)	32.6	32.8		33.5		34.2
d. Qualified teachers[3]		22 317		23 958	24 767	24 732
e. Percentage (d : b)		86.8		88.0		90.0
f. Women teachers		22 544		24 070	24 445	24 413
g. Percentage (f : b)		87.7		88.4		88.9
h. Qualified women teachers[3]		19 176		20 814	21 557	21 692
i. Percentage (h : f)		85.1		86.5		88.8
Private primary education						
a. Pupils[4]	45 495	47 156	47 138	49 248	51 918	52 447
Indices	100	104	104	108	114	115
b. Teachers[4]	1 995	1 961	2 013	2 034	2 089	2 094
Indices	100	98	101	102	104	105
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers[5]						
e. Percentage (d : b)		1 689		1 766	1 838	1 861
f. Women teachers		86.1		86.8		88.8
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	892 603	891 082	904 120	961 546	989 676	992 446
Indices	100	100	101	108	110	111
b. Teachers	27 966	27 666	28 434	29 226	29 753	29 554
Indices	100	99	102	104	106	105
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers		24 233		25 836	26 283	26 274
g. Percentage (f : b)		87.6		88.4		88.9
h. Qualified women teachers						
i. Percentage (h : f)						

UNITED KINGDOM
Table 19-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PUBLIC PRIMARY EDUCATION

Notes

1) Serving teachers, including relief teachers, at the time of the enquiry, but excluding vacant posts.

2) Full-time teachers and full-time equivalent of part-time teachers. The activity of each part-time teacher is calculated as a percentage of a full week's teaching.

3) Excluding pre-primary and special education.

4) Public and grant-aided education only, i.e. 95.8 per cent of total enrolments at this level of education in 1967-68 (excluding independent schools).

Sources

Education Statistics for the United Kingdom, 1970, Table 7, past series of data.

Supplementary Data

Pupil/teacher ratios are better in grant-aided education than in public education. In 1969-70, pupil/teacher ratios at primary level were 27.7 and 23.4 in public and grant-aided education respectively.

The percentage of full-time university-graduate teachers is tending to decline very slightly in public education. For the teaching body as a whole, it was 7.2 per cent in 1965-66 and 6.6 per cent in 1969-70. So far as women teachers only are concerned, the proportion decreased from 5.3 to 5.1 per cent over the same period.

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Table 19 - I

UNITED KINGDOM

PUPILS AND FULL-TIME(2) TEACHERS(1) IN PRIMARY(3) EDUCATION, PUBLIC(4)

School year beginning in :	1965	1966	1967	1968	1969	1970
Primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Upper primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	5 181 123	5 325 302	5 490 764	5 648 866	5 789 977	
Indices	100	103	106	109	111	
b. Teachers	184 124	189 448	195 347	202 317	209 453	
Indices	100	103	106	109	113	
c. Pupil/teacher ratio (a : b)	28.1		28.1		27.6	
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers			151 094		162 790	
g. Percentage (f : b)			77.3		77.7	
h. Qualified women teachers						
i. Percentage (h : f)						

ENGLAND-WALES
Table 20-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Full-time teachers and full-time equivalent of part-time teachers; the activity of each full-time teacher is calculated by the official services as a percentage of a week's full-time teaching.

2) Before 1965-66 cf. Study on Teachers - United Kingdom, OECD, 1969, Part One, Annex III, Tables I (a and b) and II. The latest year covered is 1964-65.

3) Including pre-primary schools and classes.

4) Including part-time pupils converted to full-time equivalent, i.e. on the basis of official statistics, each pupil is counted as one-half.

5) The percentage of women is calculated in relation to the number of full-time teachers only.

6) Excluding pre-primary and special schools receiving a grant (others are included) and combined primary/secondary schools: for example, in 1968 the numbers taken into consideration account for 50.3 per cent of total enrolments in private education when the large number of combined primary/secondary schools are included, or 99.7 per cent when they are excluded. The schools in question are recognised independent establishments and others.

Sources

Statistics of Education, 1966, 1967, 1968, 1969, Vol. I, Table I.

Supplementary Data

The average size of classes increased in public education from 32.6 pupils in 1965 to 31.9 in 1970.

Part-time teachers are responsible for a greater proportion of teaching duties (in terms of full-time equivalent) in private education (16.9 per cent in 1970) than in public education (5.8 per cent in 1970).

In primary education as a whole the number of part-time teachers has increased slightly faster than that of full-time teachers; part-time teachers covered 6 per cent of the teaching load in 1965 and 6.4 per cent in 1970.

In public education (including pre-primary schools) between 1965 and 1970, the percentage of university-graduate teachers decreased from 7.5 to 7.3 per cent for men and increased from 3.1 to 3.6 per cent for women and from 4.3 to 4.5 per cent for the teaching body as a whole.

Table 20 - 1

ENGLAND AND WALES

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PUPILS AND FULL-TIME TEACHERS[1] IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965[2]	1966	1967	1968	1969	1970
Public primary education[3]						
a. Pupils[4]	4 366 372	4 502 197	4 655 010	4 799 980	4 927 134	5 040 319
Indices	10[illegible]	103	107	110	112	115
b. Teachers	155 944	161 523	166 883	173 475	179 886	187 440
Indices	100	104	107	111	115	120
c. Pupil/teacher ratio (a : b)	28.0			27.7		26.8
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (5)	70.8			70.0		75.7
h. Qualified women teachers						
i. Percentage (h : f)						
Private primary education[6]						
a. Pupils	168 083	173 097	172 338	167 926	166 572	164 060
Indices	100	103	102	100	99	37
b. Teachers	12 480	12 516	12 408	12 223	12 174	11 054
Indices	100	100	99	98	97	88
c. Pupil/teacher ratio (a : b)	13.5			13.7		14.8
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (5)	54.6			52.1		62.3
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	4 534 455	4 775 294	4 827 348	4 968 186	5 093 706	5 204 379
Indices	100	103	106	110	112	114
b. Teachers	168 424	174 039	179 291	185 698	192 060	198 494
Indices	100	103	106	110	114	117
c. Pupil/teacher ratio (a : b)	26.9			26.7		26.2
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (5)	69.6			68.7		75.0
h. Qualified women teachers						
i. Percentage (h : f)						

SCOTLAND
Table 21-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PUBLIC PRIMARY EDUCATION

Notes

1) Full-time teachers and full-time equivalent of part-time teachers. The only figure available for 1965 is a total of 18,808 full-time qualified teachers in pre-primary and primary education.

2) Excluding pre-primary and special education.

3) Owing to inadequate data, only public and grant-aided education is covered.

4) For the same year, cf. Study on Teachers - United Kingdom, OECD, 1969, Part Two, Scotland, Annex, Tables 1 and 2. The data are not comparable as the sources differ.

5) Namely, certificated teachers. This procedure has been replaced by the registration system since 31st March, 1968. These qualified teachers include university graduates (30 per cent of full-time teachers in 1965).

6) The percentage of women teachers is calculated in relation to the number of full-time teachers only.

Sources

Scottish Educational Statistics, 1966, 1967, 1968, 1969, 1970 and 1971. Table 4.

SCOTLAND

Table 21 - 1

PUPILS AND FULL-TIME TEACHERS (1) IN PRIMARY (2) EDUCATION, PUBLIC (3)

School year beginning in :	1965 (4)	1966	1967	1968	1969	1970
Primary education						
a. Pupils	601 186	606 082	614 780	622 647	631 181	636 250
Indices		100	101	102	105	105
b. Teachers		20 717	21 008	21 355	21 905	22 863
Indices		100	101	103	105	110
c. Pupil/teacher ratio (a : b)		29.2		29.1		27.8
d. Qualified teachers						
e. Percentage (5)		97.0		98.0		99.7
f. Women teachers (6)						
g. Percentage (f : b)		85.3		86.8		87.2
h. Qualified women teachers						
i. Percentage						
Upper primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	601 186	606 082	614 780	622 647	631 181	636 250
Indices		100	101	102	105	105
b. Teachers		20 717	21 008	21 355	21 905	22 863
Indices		100	101	103	105	110
c. Pupil/teacher ratio (a : b)		29.2		29.1		27.8
d. Qualified teachers						
e. Percentage (5)		97.0		98.0		99.7
f. Women teachers (6)						
g. Percentage (f : b)		85.3		86.8		87.2
h. Qualified women teachers						
i. Percentage						

NORTHERN IRELAND
Table 22-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PUBLIC PRIMARY EDUCATION

Notes

1) There are no part-time teachers in primary education.

2) Both pre-primary and special schools are excluded. Primary schools are attended by children aged from 5 to 11 1/2 years. However, some have not yet been re-organised and take pupils up to the end of the compulsory schooling period (15 years of age).

3) Public and grant-aided education only: excluding independent schools.

4) For the same year, cf. Study on Teachers - United Kingdom, OECD, 1969, Part Three - Northern Ireland, Annex, Tables 1 and 2. The data are not exactly comparable as the sources differ.

Sources

Northern Ireland, Education Statistics: No. 7, November, 1968
Tables 6 and 8, past series of data.

No. 13, December 1971.

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Table 22 . 1

NORTHERN IRELAND

PUPILS AND FULL-TIME TEACHERS(1) IN PRIMARY(2) – EDUCATION, PUBLIC(3)

School year beginning in :	1965(4)	1966	1967	1968	1969	1970
Primary education						
a. Pupils	191 589	194 791	198 768	203 808	208 002	212 059
Indices	100	102	104	106	108	110
b. Teachers	6 483	6 657	6 834	6 958	7 136	7 320
Indices	100	103	105	107	110	112
c. Pupil/teacher ratio (a : b)	29.5		29.1	29.3		29.0
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers			5 037			
g. Percentage (f : b)			73.7			
h. Qualified women teachers						
i. Percentage (h : f)						
Upper primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	191 589	194 791	198 768	203 808	208 002	212 059
Indices	100	102	104	106	108	110
b. Teachers	6 483	6 657	6 834	6 958	7 136	7 320
Indices	100	103	105	107	110	112
c. Pupil/teacher ratio (a : b)	29.5		29.1	29.3		29.0
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers			5 037			
g. Percentage (f : b)			73.7			
h. Qualified women teachers						
i. Percentage (h : f)						

SWEDEN
Table 23-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PUBLIC PRIMARY EDUCATION

Notes

1) Full-time and part-time established teachers and reliefs. The exact number of full-time posts is not available, cf. Study on Teachers - Sweden, OECD, 1968 - Statistical Annex, Table II, Note 1.

2) Namely, Folkskolan (1-8), Grundskolan (1-6), special education and Frivilliga (voluntary schools); i.e, the lower and middle departments of public comprehensive school (private education is negligible).

3) For the years prior to 1965, cf. Study on Teachers - Sweden, OECD, 1968 - Statistical Annex, Tables II and III. The latest year covered is 1964-65.

4) Namely, the smoskollärare (women) and teachers in special education.

5) A rough estimate of the proportion of women teachers in the middle department of comprehensive schools is obtained by relating to the actual figures the percentage of women obtained in Table IV.2 of the document
Demand and Supply for Primary Teachers", SCB, Stockholm,1969.

6) Namely, primary teachers (Folkoskollärare) and teachers in special education.

7) Cf. SCB-U, 1966/11, Table 4.

8) As from 1968 double counting has been eliminated and teachers on leave are excluded.

9) Quasi-disappearence of the Folkskolan.

Sources

"Revised Calculations Concerning Demand and Supply for Primary Teachers". National Central Bureau of Statistics (SCB) Stockholm 1969-3, Table V, p. 137.

SCB green papers
U 1966/11 (Table 4)
U 1967/16 (Table 4)
U 1968/2 (Table 5)
U 1969/5 (Table 5)
U 1970/21
U 1970/5 (Table 5)
U 1971/4 (Table 5)
U 1971/6 (paragraph 3.3).

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Table 23 - 1

SWEDEN

PUPILS AND FULL-TIME TEACHERS[1] IN PRIMARY[2] EDUCATION, PUBLIC

School year beginning in :	1965 [3]	1966	1967	1968 [8]	1969	1970
Primary education (form 1 to 3)						
a. Pupils	318 000	315 195	311 906	308 692	315 504	326 314
Indices	100	99	98	97	99	102
b. Teachers[4]	18 012		17 588	16 508	17 014	18 157
Indices	100		98	92	94	100
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers[5]	18 012		17 588			18 157
g. Percentage	100,0		100,0			100,0
h. Qualified women teachers						
i. Percentage (h : f)						
Grundeskolan (form 4 to 6-8)						
a. Pupils	349 000	335 968	331 994	320 759	328 654	312 179 [9]
Indices	100	96	95	92	94	89
b. Teachers[6]	18 608		16 718	16 588	15 820	17 161
Indices	100		90	89	90	92
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage[5]	52,9		54,4			58,0
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	667 000[7]	651 163	643 900	629 451	644 158	638 493
Indices	100	98	96	94	97	95
b. Teachers	36 620		34 306	33 096	33 834	35 318
Indices	100		94	90	92	96
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage[5]	76,0		77,7			79,0
h. Qualified women teachers						
i. Percentage (h : f)						

TURKEY
Table 25-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) The available data dot not indicate whether there are any part-time teachers. It is assumed that all teachers are employed on a full-time basis.

2) For the same year, cf. Study on Teachers - Turquie, OECD, 1969 - Statistical data, Tables 1 and 2. The real total in Table 1 is obtained by adding teachers in private education.

3) Established teachers.

Sources

Statistical Yearbook of Turkey, 1968, Table 74.

Data provided by the State Institute of Statistics.

Educational Statistics: 1970-71

Supplementary Data

The trend in the percentage of women teachers has been as follows:

Public education : 26.3 per cent in 1965 and
32.3 per cent in 1970;

Private education : 77.9 per cent in 1965 and
83.8 per cent in 1970;

Primary education as a whole : 27.2 per cent in 1965 and
34.0 per cent in 1970.

Other Sources: Statistical Yearbook of Turkey, 1968.

Table 25 - I

TURKEY

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PUPILS AND FULL-TIME TEACHERS(1) IN PRIMARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (2)	1966	1967	1968	1969	1970
Primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Upper primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education						
a. Pupils	3 924 326	4 215 572	4 519 635	4 764 070	4 909 846	5 011 926
Indices	100	107	115	121	125	127
b. Teachers	85 653	96 808	107 060	117 021	126 540	132 577
Indices	100	113	125	137	148	154
c. Pupil/teacher ratio (a : b)	45.8			40.7		37.8
d. Qualified teachers (3)						99 374
e. Percentage (d : b)						74.9
f. Women teachers	23 299					45 186
g. Percentage (f : b)	27.2					34.0
h. Qualified women teachers (3)						37 722
i. Percentage (h : f)						83.4

YUGOSLAVIA
Table 26-I

NUMBERS OF PUPILS AND FULL-TIME TEACHERS IN PUBLIC PRIMARY EDUCATION

Notes

1) For the previous years, cf. Study on Teachers - Yugoslavia, OECD, 1968 - Annex I, Tables I and III. The latest year covered is 1962-63.

2) Eight-year period of schooling. No distinction can be made between the first cycle of primary school at elementary level and the second cycle (general secondary level according to the OECD Classification of Educational Systems). As the forms of education are not the same at both levels pupil/teacher ratios have not been calculated.

3) The percentage of women teachers is calculated in relation to the full- and part-time teaching body as a whole.

Sources

Statistical Yearbook of Yugoslavia, 1970 and 1972.

Supplementary Data

Part-time teachers are paid according to the class hours taught. The full-time equivalent for such staff cannot be calculated. They totalled 5[illegible] in 1965-66 and 1,346 in 1970-71.

Table 26 - 1

YUGOSLAVIA

PUPILS AND FULL-TIME TEACHERS IN PRIMARY EDUCATION, PUBLIC

School year beginning in :	1965 (1)	1966	1967	1968	1969	1970
Primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Upper primary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary education(2)						
a. Pupils	2 945 520	2 921 607	2 893 624	2 875 075	2 853 069	2 834 581
Indices	100	99	98	98	96	96
b. Teachers	101 477	105 179	108 758	113 177	115 648	118 329
Indices	100	103	107	108	113	116
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage(3)	58.7			57.8		57.6
h. Qualified women teachers						
i. Percentage (h : f)						

Series II

PUPILS AND FULL-TIME TEACHERS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

N.B.: Tables 3-II (Belgium) and 24-II (Switzerland) are not given due to the absence of available data (see Foreword).

GERMANY
Tables 1-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Full-time teachers and full-time equivalent of part-time teachers for day schools only.

2) Intermediate schools (Realschule); day school only, but figures cover pupils of the Aufbauklassen (intermediate classes attached to primary schools).

3) Lycée or Gymnasium; day school only.

4) The percentage of teachers is calculated on the number of full-time teachers only on the basis of data taken from the General Statistical Yearbooks listed below.

Sources

Study on Teachers - Germany, OECD, 1969, in particular Table 6, for the years before 1965.

Lehrerbestand und Lehrerbedarf I "Schüler - Klassen - Lehrer 1961 bis 1970". Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland, December 1969.

General Statistical Yearbooks (Statistisches Jahrbuch für die Bundesrepublik Deutschland) 1967 and 1970.

Supplementary Data

The number of pupils per class in the Realschulen has remained steady (32) as well as in the Gymnasia (28). The situation is still rather critical in the light of the target values set out in Table 5 of the OECD study referred to above which are used to assess teacher requirements. A tentative assessment of the theoretical deficit in classroom teachers and buildings for 1970 on the basis of the mean values given in this table shows that 93.2 per cent of building requirements and 86 per cent of teacher requirements are covered in the Realschulen and 86 per cent and 79 per cent respectively in the Gymnasia.

The proportion of part-time teachers (converted into the full-time equivalent) out of the total teaching force has remained steady in the intermediate school (7.6 per cent in 1966 and 7.7 per cent in 1968), but has increased in the Gymnasia (7 per cent in 1966 and 9.1 per cent in 1968). Likewise, in the intermediate schools the number of hours taught by part-time teachers rose from base 100 in 1966 to 139 in 1968, and the number of part-time teachers rose from base 100 to 277 from 1965 to 1968. From 1966 to 1968 the number of hours taught by part-time staff in the Gymnasia rose from 100 to 151, and the number of these teachers has increased threefold.

Table 1 - 11

GERMANY

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PUPILS AND FULL-TIME(1) TEACHERS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965	1966	1967	1968	1969	1970
Secondary education - first level(2)						
a. Pupils	570 239	619 975	708 725	772 836	839 481	865 617
Indices	100	109	124	135	147	151
b. Teachers	24 272	26 271	29 335	32 052	35 067	37 606
Indices	100	108	121	132	144	155
c. Pupil/teacher ratio (a : b)	23.6			24.1		23.0
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage(4)	44.6			45.9		56.1
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - second level(3)						
a. Pupils	963 624	1 042 835	1 193 603	1 269 192	1 340 983	1 371 576
Indices	100	108	124	131	139	142
b. Teachers	53 807	57 564	62 265	674 073	72 700	76 543
Indices	100	107	116	124	135	142
c. Pupil/teacher ratio (a : b)	17.9			18.9		17.9
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage(4)	30.3			29.6		32.0
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	1 533 863	1 662 810	1 902 328	2 042 028	2 180 464	2 237 193
Indices	100	108	124	133	142	145
b. Teachers	78 079	83 835	91 600	99 459	107 767	114 149
Indices	100	107	117	127	138	146
c. Pupil/teacher ratio (a : b)	19.7			20.6		19.5
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						

AUSTRIA
Table 2-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) For the same year, cf. Study on Teachers - Austria, OECD, 1968, Table 6 and comments on page 11, and Annex II - Statistical Tables (Tables VI and IX). The number of pupils given here is different from the number given in the Case Study. The figures for pupils cover only full-time pupils in the first cycle of public and private general secondary education (Allgemeinbildender Mittelschulen) and in the second cycle (Höhere Schulen) leading to higher education; they exclude students in teacher-training colleges. In this connection the statistics would seem to show that from 1966-67 students in the general classes of the teacher-training colleges have been counted with those in general secondary education, but this is not certain.

2) As in the Case Study, these are full-time teachers in public education only, teacher-training colleges being excluded. Because of the inadequacy of the statistics, which is explained on page 11 of the Case Study, it is impossible to separate teachers in public education from those in private education. The statistics for teachers in public education include a number of private teachers whose salaries since 1962 have been paid by the government. There are no figures for private teachers who are not remunerated by the government. The very rudimentary nature of the statistics makes any detailed analysis impossible and, in particular, precludes the calculation of a pupil/teacher ratio.

3) Teachers in public education and private teachers remunerated by the government.

Sources

Österreichische Schulstatistik 1965-66 to 1968-69.
Heft 15 (Table 35) 17, 18 and 20 (Table 31).

Table 2 - 11

AUSTRIA

PUPILS(1) AND FULL-TIME TEACHERS(2) IN GENERAL SECONDARY EDUCATION(1), PUBLIC AND PRIVATE

School year beginning in :	1965 (1)	1966	1967	1968	1969	1970
Secondary education - first level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - second level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	88 929	102 781	111 721	120 453	130 813	141 260
Indices	100	115	125	135	147	158
b. Teachers	6 185	7 618	7 761	7 935	*	9 484
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers(3)	2 298	2 846	2 976	3 118	*	3 920
g. Percentage (f : b)	37.1			39.3		41.3
h. Qualified women teachers						
i. Percentage (h : f)						

CANADA
Table 4-I and II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN PRIMARY AND SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Full-time teachers (at least so far as public education is concerned).
2) For the same year, cf. Study on Teachers - Canada, OECD, 1969 - Statistical data, Tables 1, 2, 3 and 4.
3) Cf. "Canada 70" - Provisional data.
4) Including pre-primary classes but excluding special education.

Sources

Canada Yearbook 1968,1969 and 1970-71.

"Canada 70", Yearbook Division, Dominion Bureau of Statistics, Ottawa.

Educational Statistics 1971-72: estimates for 1969 and 1970.

Supplementary Data

Primary and secondary education, public and private

The percentage of women teachers totalled 64.8 per cent in 1965-66 and 62 per cent in 1966-67. In 1966-67, 15 per cent and 73 per cent of teachers (men and women) in primary and secondary education respectively were university graduates.

Primary, general secondary and vocational education

In 1967-68, 15 per cent of elementary school teachers were university graduates (1.3 per cent held a Master's degree), as were 7.2 per cent of general secondary and vocational school teachers (7.2 per cent held a Master's degree). These proportions vary considerably according to the province. In the same year, moreover, two-thirds of primary teachers and one-third of general secondary and vocational school teachers were women.

Primary and general secondary education (public)

Ninety-six per cent of all pupils in primary schools and 92.7 per cent of those in secondary schools are receiving public education.

The trend in the percentage of women in the teaching body was as follows in 1965-66 and 1966-67 (excluding the Provinces of Quebec and Saskatchewan):

1) Primary education : 75.8 per cent in 1965 and
77.2 per cent in 1966;
2) Secondary education : 35.1 per cent in 1965 and
47.3 per cent in 1966.

The average length of service in the profession in terms of years of teaching was as follows in 1966-67·

1) Primary education : 5.6 for men and 6.9 for women;
2) Secondary education : 7 for men and 3.6 for women.

Other Sources: A.G. Atkinson, K.J.Barnes and Ellen Richardson, "Canada's Highly Qualified Manpower Resources", Research Branch Programme Development Service, Department of Manpower and Immigration, Ottawa, 1970, pp. 168 to 178.

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Table 4-(1)-1

CANADA

PUPILS AND FULL-TIME TEACHERS(1) IN PRIMARY AND SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965(2)	1966	1967	1968(3)	1969	1970
Primary education(4)						
a. Pupils	3 922 337	4 023 960	4 127 178	*	4 056 179	4 060 154
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education						
a. Pupils	1 205 386	1 264 719	1 327 627	*	1 690 763	1 758 023
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL primary and secondary						
a. Pupils	5 127 723	5 288 679	5 454 805	5 532 130	5 746 942	5 818 177
Indices	100	103	106	108	112	113
b. Teachers	210 102	232 414	239 127	263 485	260 727	264 558
Indices	100	111	113	125	124	125
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	136 227					
g. Percentage (f : b)	64.8					
h. Qualified women teachers						
i. Percentage (h : f)						

DENMARK
Table 5-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN PUBLIC GENERAL SECONDARY EDUCATION

Notes

1) The total number of full-time and part-time teachers.
2) Gymnasium only (including courses leading to studentereksamen) but excluding intermediate education and non-examination courses.
3) Figures for teachers not available.
4) For the same year, cf. Study on Teachers - Denmark, OECD, 1968, Table 8, p. 34.
5) University graduates only: cf. Supplementary data below.

Sources

"Statistik för gymnasieskolen undervisnings ministeriet" 1967-68, 1968-69, 1969-70, 1970-71. Tables 2.1.1 and 3.3.1.

Uddannelses Statistik - Undervisnings ministeriets 10.4, 1972, No. 9.

Supplementary Data

The trend in the number of part-time teachers (including replacements and others) is as follows:

1967-68	1,029 (33.9 per cent)
1968-69	1,120 including 374 women (33.3 per cent)
1969-70	1,220 including 414 women (33.9 per cent)

There are no figures for the full-time equivalent of these teachers.

The trend in the percentage of the teaching hours remunerated as overtime is as follows:

1967-68	27 per cent
1968-69	26.8 per cent
1969-70	27.6 per cent

In addition to the university graduates, some of the teachers are graduates from teacher-training colleges. The trend in the number of these teachers as a percentage of the total teaching force is as follows:

1966-67	7.8 per cent
1969-70	7.6 per cent

The following is the trend in the ratio between pupils in the strictly gymnasium classes and university graduate teachers:

1961 : 11; 1966 : 12; 1967 : 11.4; 1968 : 11.7;
1969 : 11.7

The trend in the percentage of university students who have already graduated in a discipline and are teaching in gymnasia is as follows:

1967-68	0.9 per cent
1968-69	0.7 per cent
1969-70	0.4 per cent.

Table 5 - 11

DENMARK

PUPILS AND FULL-TIME(1) TEACHERS IN GENERAL SECONDARY EDUCATION(2), PUBLIC AND PRIVATE

School year beginning in :	1965 (3)	1966 (4)	1967	1968	1969	1970
Secondary education - first level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - second level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	24 612	26 332	28 554	30 766	32 240	33 642
Indices	93	100	108	117	122	127
b. Teachers		3 290	3 480	3 663	3 863	4 196
Indices		100	106	111	117	127
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers(5)		2 393	2 494	2 622	2 748	*
e. Percentage (d : b)		72.7		71.5	71.1	
f. Women teachers		923	1 023	1 090	1 182	1 301
g. Percentage (f : b)		28.0		29.7		31.0
h. Qualified women teachers						
i. Percentage (h : f)						

SPAIN
Table 6-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) The sources used do not show whether the figures include part-time teachers. The percentage should be fairly low in public education, and all teachers are therefore regarded as being full-time. In private education, the statistics recorded in terms of physical persons are often duplicated or even triplicated and the pupil/teacher ratio has therefore not been computed.

2) For the years before 1956-66, cf. Study on Teachers - Espagne, OECD, 1969 - Statistical Data, Tables 4 and 5. The last available year is 1965-66 for pupils and 1960-61 for teachers. The difference in the data on pupils is due to the exclusion here of "free" pupils in public education.

3) Excluding "free" pupils: they numbered 376,816 in 1969-70.

4) These are established teachers and "adjuntos numerarios". From 1968-69, change in the breakdown of teachers.

5) Teachers with Arts or Science degrees. Teachers without a degree and all teachers of fine arts and special subjects are excluded.

Sources

"Estadistica de la enseñanza media en España" for the years under reference.

Annuario estadistico 1970.

Supplementary Data

There is a fairly high demand for science teachers. At present 70 per cent of university graduate teachers in general secondary education have an Arts degree.

The high figure for "free" pupils is due to the gap between the demand for secondary education and the facilities available for public education, despite the fact that official or recognised centres have recently been set up. Initially provisional, this regulation on "free" pupils has become statutory and involved 33.5 per cent of pupils in 1966-67.

From 1967-68 public intermediate institutes, recognised centres and technical institutes were established throughout the country leading to a reduction in the number of "free" pupils and a heavy demand for teachers in general and technical education.

Other Sources: La Educacition en España - "Bases para una politica educativa", Madrid, 1969.

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TABLE 6 - II

SPAIN

PUPILS AND FULL-TIME[1] TEACHERS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (2)	1966	1967	1968	1969	1970
Secondary education - Public						
a. Pupils (3)	179 487	213 786	298 319	360 874	441 299	
Indices	100	119	166	201	245	
b. Teachers	6 360	6 866	8 044	9 921	*	
Indices	100	108	126	155		
c. Pupil/teacher ratio (a : b)	28.2		37.0	36.3		
d. Qualified teachers (4)	3 182	3 370	* (4)	4 149	*	
e. Percentage (d : b)	50.0	49.1		41.8		
f. Women teachers	2 715	2 927	3 430	*	*	
g. Percentage (f : b)	42.7		42.6			
h. Qualified women teachers	1 238	1 317	*	*	*	
i. Percentage (h : f)	45.6	45.0				
Secondary education - private						
a. Pupils	366 807	403 475	463 234	485 743	552 963	
Indices	100	110	126	132	150	
b. Teachers	22 251	24 145	26 075	*	*	
Indices	100	108	117			
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers (5)	11 868	13 845	14 593	*	*	
e. Percentage (d : b)	53.3		55.9			
f. Women teachers	8 865	9 610	10 228	*	*	
g. Percentage (f : b)	39.8		39.2			
h. Qualified women teachers	4 938	5 919	6 131	*	*	
i. Percentage (h : f)	55.7		59.9			
TOTAL secondary education						
a. Pupils	546 294	617 261	761 553	846 617	994 262	
Indices	100	113	139	155	182	
b. Teachers	28 611	31 011	34 119	*	*	
Indices	100	108	119			
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	11 580	12 537	13 658	*	*	
g. Percentage (f : b)	40.5		40.0			
h. Qualified women teachers						
i. Percentage (h : f)						

UNITED STATES
Table 7-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN PUBLIC AND PRIVATE SECONDARY EDUCATION

Notes (N.B. General and technical education)

1) Full-time and part-time teachers. In 1967, full-time teachers accounted for 98 per cent of the total number of teachers. The pupil/teacher ratio is calculated on the assumption that the proportion of part-time teachers has not changed and that all teachers are full-time.

2) For the same year, cf. Study on Teachers - United States, OECD, 1969, Statistical Data, Tables 1(a) and 3. The figures given for 1965-66 in the OECD document were provisional which is the reason for the differences found here.

3) Provisional.

4) Estimates.

Sources

"Projections of Educational Statistics", to 1977-78, Tables 3, 23 and 24 up to 1968.

"Digest of Educational Statistics", 1968, 1969 and 1970.

Supplementary Data

In 1965-66, 69.6 per cent of teachers in public primary and secondary education held a Bachelor's degree and 21.9 per cent a Master's degree. Of those with a Bachelor's degree, 63.2 per cent were men and 72.6 per cent women, and of those with a Master's degree, 32.2 per cent were men and 17.2 per cent women.

The average age of teachers in public secondary education is 33. Half of them teach in senior high schools and three out of ten in junior high schools. All possess Bachelor's degree and three out of ten a higher diploma. Their average experience in teaching is seven years. They spend 30 hours each week with 130 pupils (27 pupils in a class) and work 48.3 hours per week. Six out of ten teach English, Social Science, Mathematics and Science. Fifty-five per cent of them are men.

Other Sources "Research Report 1967, R.4., The American Public School Teacher", Research Division, National Education Association.

Data from Survey: Data sheets prepared from 2,344 replies broken-down as follows:

52 per cent primary education
48 per cent secondary
31 per cent men
69 per cent women (including 45 per cent married women).

TABLE 7 - 11

UNITED STATES OF AMERICA

PUPILS AND FULL-TIME TEACHERS(1) IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (2)	1966	1967	1968	1969	1970 (4)
Secondary education - Public						
a. Pupils	15 504 000	15 934 000	16 506 000	17 543 239	18 163 426	18 712 000
Indices	100	103	106	113	117	121
b. Teachers	746 000	783 000	815 000(3)	863 532	906 062	935 000
Indices	100	105	109	116	121	125
c. Pupil/teacher ratio (a : b)	20.8		20.2			20.0
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - private						
a. Pupils	1 400 000	1 400 000	1 400 000	1 400 000	1 400 000	1 400 000
Indices	100	100	100	100	100	100
b. Teachers	82 000	86 000	87 000(3)	85 000	85 000	80 000
Indices	100	105	106	106	104	98
c. Pupil/teacher ratio (a : b)	17.1		16.1			17.5
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	16 904 000	17 334 000	17 906 000	18 943 239	19 563 426	20 112 000
Indices	100	102	106	112	116	119
b. Teachers	828 000	869 000	902 000(3)	950 532	991 062	1 015 000
Indices	100	105	109	115	120	123
c. Pupil/teacher ratio (a : b)	20.4		19.8			19.8
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						

FINLAND
Table 8-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) The figures do not indicate whether part-time teachers are included.

Sources

"Statistical Yearbook of Finland" 1969 and 1970.

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TABLE 8 - 11

FINLAND

PUPILS AND FULL-TIME(1) TEACHERS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965	1966	1967	1968	1969	1970
Secondary education - first level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - second level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	268 014	282 147	291 615	305 420	315 710	
Indices	100	105	109	114	118	
b. Teachers	14 072	14 838	15 413	16 193	16 872	
Indices	100	105	109	115	120	
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	8 188	8 709	9 151	9 713	10 235	
g. Percentage (f : b)	58.2		59.3		60.6	
h. Qualified women teachers						
i. Percentage (h : f)						

FRANCE
Table 9-II (a)

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN THE FIRST CYCLE OF PUBLIC GENERAL SECONDARY EDUCATION

Notes

1) For the years up to 1965, cf. Study on Teachers - France, OECD, 1969 - Annex III, Tables VII (a) and IX (a). The last available year is 1964-65 and the figures cover the whole of the first cycle.

2) Transitional classes and terminal practical classes in the Colleges of General Education (CEG), Colleges of Secondary Education (CES) and Lycées. In 1965, teachers of these classes were not shown separately. In 1966, the figures excluded 7,993 pupils attending Lycées for whom the teacher ratio is not available.

3) Including physical training and sports teachers.

4) Including the vocational sections of the short second cycle in 1967, they covered 44,380 pupils in the CEG and 2,100 pupils in the CES and Lycées.

5) In these colleges, a pupil/teacher ratio would not be meaningful since the educational structures are too varied in terms of the type of education received.

Sources

Tableaux de l'Education nationale 1958-1968.

Informations statistiques, ministère de l'Education nationale.

Situation statistique du personnel enseignant du second degré public en 1968-69, notes d'information no. 43, ministère de l'Education nationale.

Supplementary Data

Part-time teachers between 1965 and 1969. In the CEGs their share increased from 12 to 22 per cent of the total number of teachers, (women accounting for 63.3 per cent in 1965 and 52.9 per cent in 1969). In 1966, 24.6 per cent taught modern foreign languages, 46.7 per cent Fine Arts and special subjects and 6.2 per cent, Science. In the CESs, the share of part-time teachers increased from 4.1 to 10 per cent, the proportion of women rising from 56 to 62.1 per cent.

Trends in qualification between 1966 and 1970. In the transitional and terminal practical classes of the CESs and CEGs the percentage of specialised teachers (all classroom teachers, except non-specialised primary teachers) fell from 85.7 to 37.5 per cent, whereas for the same classes in the Lycées, the percentage was 41.0 per cent in 1970. In the CEG type of education, the percentage of specialised teachers (same criterion as above) fell from 85.5 per cent to 75.3 per cent. In the Lycee type of education the number of qualified teachers increased from 53.3 per cent to 55.4 per cent.

Other Sources: Le personnel enseignant des établissements de second degré, proportion d'auxiliaires, MEN, Documents No. 2515, 2516, 2517, 3615 and 4206.

TABLE 9 - II (a)

FRANCE

PUPILS AND FULL-TIME TEACHERS IN GENERAL SECONDARY EDUCATION, PUBLIC - FIRST LEVEL

School year beginning in :	1965 (1)	1966	1967	1968	1969	1970
First level transition and pratique (2)						
a. Pupils		82 089	167 025	276 379	360 075	414 552
Indices		100	203	336	438	505
b. Teachers (3)		3 757	7 501	12 955	17 336	20 795
Indices		100	199	344	461	553
c. Pupil/teacher ratio (a : b)		23.9		21.3		19.9
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers		1 887	3 952	6 923	9 317	10 985
g. Percentage (f : b)		50.2		54.4		52.8
h. Qualified women teachers						
i. Percentage (h : f)						
First level - CEG (4)						
a. Pupils	753 141	684 681	626 035	589 816	531 796	463 075
Indices		100	91	86	77	61
b. Teachers	33 180	31 211	28 432	27 146	26 828	24 867
Indices		100	91	87	86	79
c. Pupil/teacher ratio (a : b)		21.9		21.7		18.6
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	18 328	17 328	15 849	15 663	15 191	14 736
g. Percentage (f : b)	55.2	55.5		57.6		59.2
h. Qualified women teachers						
i. Percentage (h : f)						
First level - Lycée - CES (4)						
a. Pupils	209 585	281 030	421 278	611 039	792 921	982 220
Indices		100	149	217	282	468
b. Teachers	8 352	12 593	19 031	29 278	38 828	49 397
Indices		100	151	232	308	392
c. Pupil/teacher ratio (a : b) (5)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	4 838	7 523	11 597	18 163	24 421	31 475
g. Percentage (f : b)	57.9	59.7		62.0		63.7
h. Qualified women teachers						
i. Percentage (h : f)						

FRANCE
Table 9-II (b)

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN THE SECOND CYCLE OF PUBLIC GENERAL AND TECHNICAL, SECONDARY EDUCATION

Notes

1) For the years before 1965 cf. Study on Teachers - France, OECD, 1969 - Annex III, Tables VII (a) and IX (a). The last available year is 1964-65.

2) Apart from the second cycle of long general and technical education, these figures cover:
   a) first cycle pupils (530,091 in 1967);
   b) pupils in the second cycle of short education (14,879 in 1967);
   c) pupils in the preparatory classes for general and technical education (48,628 in 1967), excluding students in teacher-training colleges. The pupil/teacher ratios, moreover, show that the school situation is not uniform.

Sources

Tableaux de l'Education nationale 1958-1968 and 1969. Service central des statistiques et de la Conjoncture du Ministère de l'Education nationale.

Note d'information No. 43, Janvier, 1970. Service central des statistiques et de la conjoncture.

Supplementary Data

In 1965, part-time teachers accounted for 4.1 per cent of the total number of teachers and in 1969 for 10.3 per cent (52.9 per cent of whom were women).

The Authorities consider as qualified teachers those who hold at least a licence ("agrégés", certificated teachers and instructors). The unqualified teachers or "maitres rectoraux" include assistants, primary teachers, teachers on contract and auxiliaries. The percentage of qulified teachers remains steady (75.3 per cent in 1970 compared with 74.0 per cent in 1965). It is higher in general and technical theoretical education (75.8 per cent in 1970) than in practical education (72.4 per cent in 1970). As regards subjects, there is a large and steady percentage of qualified teachers of Philosophy (82.8 per cent in 1970); the percentage is increasing in Mathematics (from 63 per cent to 75.3 per cent) and in Science (from 72.2 per cent to 88.8 per cent), but is decreasing slightly in the Arts, Modern Languages, Fine Arts and special subjects and rather rapidly in technical and theoretical education (from 64.8 per cent to 55.0 per cent). Many of the teachers have not received teacher-training (only one-third of secondary teachers are certificated).

Other Sources; Le personnel enseignant des établissements de second degré. Proportion des auxiliaires. Documents No. 2514, 2515, 2516, 2517, 3615 and 4206. Service central des statistiques et de la conjoncture.

Enquête statistique par fiche individuelle sur le personnel enseignant dans les établissements de second degré publics. Etude No. 19, 1971. Service central des statistiques et de la conjoncture.

TABLE 9 - II (b)

FRANCE

PUPILS AND FULL-TIME TEACHERS IN GENERAL in TECHNICAL
SECONDARY EDUCATION, PUBLIC - FIRST LEVEL

School year beginning in :	1965 (1)	1966	1967	1968	1969	1970
Secondary education - first level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - second level (2)						
a. Pupils	1 193 698	1 181 604	1 161 631	1 144 106	1 115 269	1 137 999
Indices	100	98	97	95	93	95
b. Teachers	63 817	65 003	66 363	66 986	69 342	70 302
Indices	100	101	103	104	108	110
c. Pupil/teacher ratio (a : b)	18.7			17.0		16.1
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	33 628	34 208	34 972	35 575	37 427	37 742
g. Percentage (f : b)	52.6			53.1		53.6
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						

GREECE
Table 10-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Namely, teachers of Science, Arts, Modern Languages and religious instruction (15.5 per cent in public education in 1966; they often have to teach other subjects) and other teachers.

2) Full-time only. See supplementary data below for overtime.

3) Gymnasium and Lycée. From 1967, the statistics cover both types of school.

4) For the years before 1965 cf. Study on Teachers, Grèce, OECD, 1968 - Annex II, Tables VII (a and b) and IX. The last available year is 1962-63 but the series could not be linked up with the available statistics.

5) All the teachers in public education are qualified.

6) The exact figures for the numerous part-time teachers are not available and the pupil/teacher ratio has therefore not been calculated.

Sources

Educational statistics, in particular, page 6, section on secondary education, 1969-70.

Supplementary Data

The problems resulting from the shortage of science and mathematics teachers and ways of solving them are set out on pages 3 and 4 of the OECD document "Educational Growth Enquiry - Country Replies". In 1967, these teachers accounted for 23.3 per cent of the total number of teachers in public secondary education and 24.7 per cent in private education compared with 24.8 per cent and 22.8 per cent respectively in 1964.

The full-time equivalent of overtime worked by teachers in public education in 1966 was 278 teachers, the pupil/teacher ratio being 29 for 1966 instead of 29.7; the difference is quite small. The number of hours overtime worked by teachers in public secondary education, however, has tended to fall (8,366 hours in 1965 and 5,759 in 1967).

TABLE 10 - II

PUPILS AND FULL-TIME[2] TEACHERS[1] IN GENERAL SECONDARY EDUCATION,(3) PUBLIC AND PRIVATE

School year beginning in :	1965[4]	1966	1967	1968	1969	1970
Secondary education - Public						
a. Pupils	313 645	326 789	343 982	343 754	354 968	
Indices	100	104	110	109	113	
b. Teachers	10 130	10 978	10 722	10 868	11 157	
Indices	100	108	106	107	110	
c. Pupil/teacher ratio (a : b)	31.0		32.1		32.0	
d. Qualified teachers (5)						
e. Percentage (d : b)						
f. Women teachers	4 305	4 700	4 801	4 951	5 404	
g. Percentage (f : b)	42.5		44.8		48.4	
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - Private						
a. Pupils	38 492	37 936	40 169	41 813	45 335	
Indices	100	98	104	108	118	
b. Teachers (6)	1 121	1 133	1 747	1 561	1 502	
Indices	100	101	155	139	133	
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	481	408	745	697	739	
g. Percentage (f : b)	42.9		42.6		49.2	
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	352 137	364 725	384 151	385 567	400 303	
Indices	100	104	109	109	113	
b. Teachers	11 251	12 111	12 469	12 429	12 659	
Indices	100	108	111	110	112	
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	4 786	5 108	5 546	5 648	6 143	
g. Percentage (f : b)	42.5		44.5		48.6	
h. Qualified women teachers						
i. Percentage (h : f)						

IRELAND
Table 11-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Full time and part time.

2) For the same year cf. Study on Teachers - Ireland, OECD, 1969 - Statistical Annex, Tables 3 and 8.

3) Registered teachers.

Source

"Statistical Abstract of Ireland", 1968 and 1969.

TABLE 11 - II

PUPILS AND FULL-TIME[1] TEACHERS IN GENERAL
SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (2)	1966	1967	1968	1969	1970
Secondary education - first level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - second level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	98 667	103 558	118 807			
Indices	100	104	120			
b. Teachers	6 795	7 248	8 165			
Indices	100	106	120			
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers (3)	4 332	4 595	5 026			
e. Percentage (d : b)	63,7	63,4	61,5			
f. Women teachers	3 823	4 135	4 624			
g. Percentage (f : b)	56,2	57,0	56,6			
h. Qualified women teachers	2 141	2 291	2 581			
i. Percentage (h : f)	56,0	55,4	55,8			

ICELAND
Table 12-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Full-time and part-time teachers.

2) For the same year, cf. Study on Teachers - Iceland, OECD, 1969 - Statistical Data, Tables 4 and 5. The data on general teachers are not comparable since Table 4 of the OECD document shows only full-time teachers.

Sources

"Yearbook of Nordic Statistics"
1967 Table 118
1969 Tables 136 and 138
1971 Table 146
1972 Tables 157 and 158.

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TABLE 12 - 11

ICELAND

PUPILS AND FULL-TIME(1) TEACHERS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965(2)	1966	1967	1968	1969	1970 (3)
Secondary education - first level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - second level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	14 326	14 250				18 829
Indices	100	99				131
b. Teachers	928	1 025	1 101	1 099	1 196	1 349
Indices	100	110	119	118	128	145
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						

ITALY
Table 13-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) All the teachers are regarded as being full-time. In Italy, teaching legislation makes little reference to part-time teachers and their exact share cannot be assessed. In the public intermediate school, for instance, a reasonable supposition is that only teachers of the Fine Arts and special subjects without specific qualifications can be employed half-time. They accounted for 0.6 per cent of teachers in 1968-69. Some of the established primary teachers, not classified by sex, are excluded and show the following trend:

   1965-66 : 3,437
   1968-69 : 3,804

2) For the years before 1965-66, cf. Study on Teachers - Italie, OECD, 1968 - Annex II, Tables VII (a, b, c, d) and IX. The last available year is 1963-64.

3) Scuola media.

4) Established teachers and "abilitati" from among the non-established teachers.

5) Namely, teacher-training colleges (scuola magistrale and institute magistrali), scientific Lycées, and Gymnasia and Lycées accounting for 95 per cent of long general education (excluding art schools and the music academy).

Sources

Annuario statistico dell' istruzione italiana 1965 to 1971.

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TABLE 13 - (I

ITALY

PUPILS AND FULL-TIME[(1)] TEACHERS IN GENERAL
SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965(2)	1966	1967	1968	1969	1970
Secondary education - first level(3)						
a. Pupils	1 795 214	1 820 820	1 891 421	1 981 739	2 064 137	
Indices	100	101	105	110	115	
b. Teachers	150 911	156 178	162 112	168 127	178 303	
Indices	100	103	107	111	118	
c. Pupil/teacher ratio (a : b)	11.9		11.6		11.5	
d. Qualified teachers(4)	65 486	66 210	70 128	82 527	83 474	
e. Percentage (d : b)	43.4		43.2		46.8	
f. Women teachers	91 494	95 634	100 339	105 118	*	
g. Percentage (f : b)	60.6			62.5		
h. Qualified women teachers	?					
i. Percentage (h : f)						
Secondary education - second level(5)						
a. Pupils	499 290	568 569	602 431	633 475	658 800	
Indices	100	114	121	127	131	
b. Teachers	35 542	39 494	41 612	43 877	46 831	
Indices	100	111	117	123	131	
c. Pupil/teacher ratio (a : b)	14.0		14.4		14.0	
d. Qualified teachers(4)	22 538	24 980	26 392	25 180	30 424	
e. Percentage (d : b)	63.4			57.4	64.9	
f. Women teachers	20 263	22 624	24 027	25 352	*	
g. Percentage (f : b)	57.0			57.8		
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	2 294 504	2 389 389	2 493 852	2 615 214	2 722 937	
Indices	100	104	109	114	118	
b. Teachers	186 453	195 672	203 724	212 004	225 134	
Indices	100	105	109	114	120	
c. Pupil/teacher ratio (a : b)	12.3		12.2		12.0	
d. Qualified teachers(4)	88 024	91 190	96 520	107 707	113 898	
e. Percentage (d : b)	47.2		47.3		50.5	
f. Women teachers	111 757	118 258	124 366	130 470	*	
g. Percentage (f : b)	58.9			61.5		
h. Qualified women teachers						
i. Percentage (h : f)						

JAPAN
Table 14-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN GENERAL AND TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) For the same year, cf. Study on Teachers - Japan, OECD, 1969 - Statistical Data, Tables 1, 5 and 6.

2) Because of lack of more accurate data the figures are for teachers and assistant teachers.

3) Full-time teaching only.

4) Full-time and part-time teachers can no longer be broken down.

Sources

Annual report of the Ministry of Education; Japan 1965, 1966 and 1967. Japan Statistical Yearbook, 1969.

Supplementary Data

In 1969, there was an average of 37 pupils per class in secondary education.

The average number of hours of duty per week is 30.1 (including 21.5 teaching hours) in the first cycle and 22.9 (including 17 teaching hours) in the second cycle.

Between 1965 and 1968 the trend in the training level was as follows:

In the first cycle, teachers who had spent four years or more in a university accounted for 44.8 per cent in 1965 and 52.9 per cent in 1968. The proportion of teachers who had spent two years (but less than four) or more in a university fell from 50.2 per cent to 43.4 per cent over the same period and those with secondary education diplomas from 4.9 per cent to 3.7 per cent.

The trend in percentages in the second cycle (full-time and part-time) between 1965 and 1968 was as follows:

a) The percentage rose from 69.4 to 91.2 for teachers with four years' and more experience of university education, it fell from 28.1 to 7.3 for those with two years' and more experience of university education and from 2.3 to 1.5 for teachers with secondary education diplomas.

b) The following training criteria are required in the first-cycle : two years' training after the second cycle of secondary education for second category teachers and two years' university education (Bachelor's degree) for first category teachers.

Other Sources: "Outline of Education in Japan, March, 1970", Agency for Cultural Affairs, Government of Japan.

"Interim Report on Fundamental Policies and Measures for the Overall Expansion and Development of School Education in the Future", 30th June, 1969, Ministry of Education, Japan.

TABLE 14 - 1)

JAPAN

PUPILS AND FULL-TIME TEACHERS IN GENERAL AND TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (1)	1966	1967	1968	1969	1970
General education-first level						
a. Pupils	5 956 630	5 555 762	5 270 851	5 043 069	4 865 196	4 716 833
Indices	100	93	88	84	81	79
b. Teachers	237 750	233 976	232 138	230 516	227 407	224 545
Indices	100	98	97	97	95	94
c. Pupil/teacher ratio (a : b)	25.0			21.9		21.0
d. Qualified teachers (2)	221 322	217 708	215 926	214 111	211 077	208 375
e. Percentage (d : b)	93.0			92.9		92.8
f. Women teachers	60 216	59 253	59 670	59 917	59 367	59 498
g. Percentage (f : b)	25.3			25.9		26.5
h. Qualified women teachers						
i. Percentage (h : f)						
General and technical education - second level (3)						
a. Pupils	4 553 759	4 480 179	4 292 283	4 077 645	3 931 918	(4)
Indices	100	98	94	89	86	
b. Teachers	172 261	177 122	178 222	178 331	179 137	
Indices	100	102	103	103	104	
c. Pupil/teacher ratio (a : b)	26.4		24.0		21.9	
d. Qualified teachers (2)	159 404	164 164	165 349	165 654	166 689	
e. Percentage (d : b)	92.5		92.7		93.0	
f. Women teachers	30 993	31 705	31 516	31 020	30 909	
g. Percentage (f : b)	17.9		17.6		17.2	
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education (3)						
a. Pupils	10 510 389	10 035 941	9 563 134	9 120 714	8 797 111	
Indices	100	95	90	86	83	
b. Teachers	410 011	411 098	410 360	408 847	406 544	
Indices	100	100	100	99	99	
c. Pupil/teacher ratio (a : b)	25.6		23.3		21.6	
d. Qualified teachers (2)	380 726	381 872	381 275	379 765	377 766	
e. Percentage (d : b)	92.8		92.9		92.9	
f. Women teachers	91 209	90 958	91 186	90 937	90 276	
g. Percentage (f : b)	22.2		22.2		22.2	
h. Qualified women teachers						
i. Percentage (h : f)						

LUXEMBOURG
Table 15-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN PUBLIC GENERAL SECONDARY EDUCATION

Notes

1) Full time and part time.

2) Absence of data on teachers in private education.

3) For the years before 1965, cf. Study on Teachers - Luxembourg, OECD, 1968 - Annex I, Tables VII and IX. The last available year is 1963-64.

4) Start of intermediate education. Data taken from OECD document (see note above) Annex I, Table VIII.

5) Teachers holding a doctorate and Heads of Institutions (the latter cannot be separated).

Sources

Courrier de l'Education nationale No. B 3/70, page 22; No. B 2/70, pages 10 and 52, and the corresponding series for 1970-71.

Supplementary Data

Figures for the full-time equivalent of part-time teachers in certain secondary education institutions are available for 1969-70. These are the Petange, Dudelange and Luxembourg colleges which cover 1,082 pupils (85 per cent of all pupils at this level). The official number of hours of duty per week is 21.

Fifty-five full-time teachers and 727 teaching hours by part-time teachers (34) are allocated to these 1,082 pupils. This gives an average pupil/teacher ratio of 19.7 in these institutions.

Women account for 22.3 per cent of the total teaching force (29 women per 130 teachers).

Of these 130 teachers:

20 per cent are in intermediate education;

3 per cent are in vocational education;

43 per cent are in secondary education;

34 per cent are assistant professors.

LUXEMBOURG

TABLE 15 - II

PUPILS AND FULL-TIME(1) TEACHERS IN GENERAL SECONDARY EDUCATION, PUBLIC(2)

School year beginning in :	1965(3)	1966(4)	1967	1968	1969	1970
Secondary education - first level						
a. Pupils		577	1 036	1 356	1 270	1 444
Indices						
b. Teachers		56				
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers		16				
g. Percentage (f : b)		28.5				
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - second level						
a. Pupils	5 798	6 057	6 336	6 932	7 359	7 708
Indices	100	104	109	120	127	132
b. Teachers	407				555	542
Indices	100				136	133
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers (5)					333	332
e. Percentage (d : b)					60.0	61.2
f. Women teachers	88				127	120
g. Percentage (f : b)	21.6				22.9	22.0
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils		6 634	7 372	8 288	8 629	9 152
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						

NORWAY
Table 16-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Full-time teachers only.

2) For the same year cf. Study on Teachers - Norway, OECD, 1969 - Statistical Data, Tables 2 and 4. The data are not comparable.

3) Namely:

Ungdonskoler - higher classes of the primary school ;

Framholdsskoler - continuation school - short secondary education about to be phased out;

Folk-high schools - former secondary schools (one or two years).

4) Namely graduates from the university and teacher training colleges and specialised teachers with suitable qualifications.

5) Namely: realskoler, two or three years; gymnase, three years

Sources

Undervisningsstatistikk - statistisk sentralbyrå, Oslo for 1965 to 1970.

Norwegian Statistical Yearbook from 1968.

Supplementary Data

There are a fair number of part-time teachers, but figures for their full-time equivalent are not available. In the first cycle they accounted for 17 per cent of the total number of primary teachers in 1965 and 16.2 per cent in 1970 (64.0 per cent women). In the second cycle, part-time teachers, although much more numerous, are tending to decrease (45.7 per cent of the total in 1965 and 40.5 per cent in 1970). The percentage of women is comparatively less than in the first cycle.

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TABLE 16 - II

NORWAY

PUPILS AND FULL-TIME[(1)] TEACHERS IN GENERAL
SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (2)	1966	1967	1968	1969	1970
Secondary education - first level (3)						
a. Pupils	83 113	98 312	111 415	141 169	150 645	166 765
Indices	100	118	134	170	181	200
b. Teachers	5 594	6 623	7 737	9 328	10 802	12 296
Indices	100	118	138	167	193	219
c. Pupil/teacher ratio (a : b)	14.9			15.1		13.5
d. Qualified teachers (4)	4 796	5 900	6 955	*	*	11 054
e. Percentage (d : b)	85.7		90.0			89.8
f. Women teachers	1 834	2 152	2 563	3 632	3 746	4 385
g. Percentage (f : b)	32.8			38.9		35.6
h. Qualified women teachers	1 421	1 839	2 235	*	*	3 902
i. Percentage (h : f)	77.5		87.2			88.9
Secondary education - second level (5)						
a. Pupils	106 918	103 197	98 300	91 154	83 804	76 949
Indices	100	96	92	85	78	72
b. Teachers	5 276	5 243	5 176	4 942	4 562	4 324
Indices	100	99	98	94	86	82
c. Pupil/teacher ratio (a : b)	20.3			18.4		17.7
d. Qualified teachers (4)	4 924	4 960	4 901	*	*	4 159
e. Percentage (d : b)	93.3		94.7			96.1
f. Women teachers	1 239	1 214	1 206	1 118	986	910
g. Percentage (f : b)	23.5			22,6		21.0
h. Qualified women teachers	1 108	1 111	1 108	*	*	865
i. Percentage (h : f)	89.4		91.9			95.0
TOTAL secondary education						
a. Pupils	190 031	201 509	209 715	232 323	234 449	243 714
Indices	100	106	110	122	123	128
b. Teachers	10 870	11 866	12 913	14 270	15 364	16 620
Indices	100	109	119	131	141	152
c. Pupil/teacher ratio (a : b)	17.5			16.2		14.6
d. Qualified teachers (4)	9 720	10 860	11 856	*	*	15 213
e. Percentage (d : b)	89.4		91.8			91.5
f. Women teachers	3 073	3 366	3 769	4 750	4 732	5 295
g. Percentage (f : b)	28.3			33.2		31.8
h. Qualified women teachers	2 529	2 950	3 343	*	*	4 767
i. Percentage (h : f)	82.3		88.7			90.0

NETHERLANDS
Table 17-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Full-time and part-time.

2) For the years before 1965-66, cf. Study on Teachers - Netherlands, OECD, 1968 - Annex IV, Tables VII and IX. The last available year was 1964-65.

3) The Uitgebreid Lager Onderwijs (ULO) (advanced elementary education) was suppressed in 1968-69.

4) Compulsory subjects.

Sources

Statistics on secondary modern schools 1967-68.

Statistics on secondary education 1965-66 to 1968-69 (Central Bureau of Statistics).

Report of the Government of the Netherlands on the Development of Education in 1968, 1969 and 1970 (T.2) Ministry of Education and Sciences.

Netherlands Statistical yearbook 1967-68 and 1971.

Supplementary Data

The average number of pupils per class was 25.6 in 1967-68 in the first cycle (ULO) and 23.1 in the second cycle (VHMO) compared with 22 in 1964-65.

The trend in the percentage of lessons given by teachers who have not qualified in the subject taught is as follows:

- in short education : 3.5 per cent in 1964-65 and
  2.9 per cent in 1967-68 :

- in traditional long education:
  23.3 per cent in 1965-66 and
  21.8 per cent in 1967-68.

The highest percentages are noted in science subjects.

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NETHERLANDS

TABLE 17 - 11

PUPILS AND FULL-TIME[1] TEACHERS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (2)	1966	1967	1968	1969	1970
Secondary education - first level[3]						
a. Pupils		273 959	279 491			
Indices						
b. Teachers		10 834	11 075			
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers		10 834	11 075			
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - second level						
a. Pupils	211 280	215 915	225 613	537 281	561 657	591 311
Indices	100	102	107			
b. Teachers[4]	14 729		17 100	34 907	36 912	38 849
Indices	100		116			
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers			3 587	7 541	8 127	8 677
g. Percentage (f : b)			21.0	21.6		22.3
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils		489 874	505 104	537 281	561 657	591 311
Indices						
b. Teachers				34 907	36 912	38 849
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers				7 541	8 127	8 677
g. Percentage (f : b)				21.6		22.3
h. Qualified women teachers						
i. Percentage (h : f)						

PORTUGAL
Table 18-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) There are no part-time teachers as such although some "possible teachers" may teach for a restricted number of hours. This, however, is seldom the case and here all teachers are regarded as full-time.

2) Liceal.

3) For years before 1965-66, cf. Study on Teachers - Portugal, OECD, 1968 - Annex II, Tables VII, VIII and IX. The last available year is 1964-65.

4) Excluding the preparatory cycle which had just been set up (which includes the corresponding years of the first cycle Lycée). The preparatory cycle which is common to general and vocational education will gradually replace the first cycle of the Lycee.

   In public education this preparatory cycle covers 2,873 teachers, including 1,006 women (35 per cent), for 46,203 pupils (a pupil/teacher ratio of 16.0).

   In private education in the same cycle there are 3,703 teachers, including 1,754 women (47 per cent) for 27,082 pupils (a pupil/teacher ratio of 7.3).

   Would-be teachers, in the preparatory classes have to pass a State examination after a course of educational science at the Arts Faculty followed by a year's training period. This training is open to graduates and specially qualified primary teachers.

5) The sources used give no figures for the breakdown by subject and the qualifications or status of secondary teachers in public education.

   In private education, in principle, general teachers require a degree in the subject they are teaching (Arts or Science) but no training in teaching is officially required.

6) The figures for pupils cover education in an institution and education given individually and at home (35,802 in 1965-66 and 43,057 in 1968-69). On the other hand, only general teachers in an institution are recorded.

Sources

Estatisticas da educaçao and

Annuario estatistico for the years under reference.

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TABLE 78 - 11

PORTUGAL

PUPILS AND FULL-TIME(1) TEACHERS IN GENERAL SECONDARY(2) EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (3)	1966	1967	1968	1969	1970
Secondary education - Public						
a. Pupils	62 036	66 391	69 642	59 030(4)	53 913	65 226
Indices	100	107	112			
b. Teachers	2 825	2 934	3 339	3 067	3 114	3 365
Indices	100	104	118			
c. Pupil/teacher ratio (a : b)	22.0		20.9	19.2		19.3
d. Qualified teachers (5)						
e. Percentage (d : b)						
f. Women teachers	*	1 109	*	1 241		2 140
g. Percentage (f : b)		37.8		40.4		63.5
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - Private						
a. Pupils(6)	87 697	89 054	90 246	84 940	66 460	72 033
Indices	100	101	103			
b. Teachers	4 320	4 207	4 022	4 481	4 111	4 071
Indices	100	97	93			
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers (5)						
e. Percentage (d : b)						
f. Women teachers	*	2 127	*	2 232		2 003
g. Percentage (f : b)		50.4		49.8		49.3
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	149 733	155 445	159 888	143 970	120 373	137 259
Indices	100	104	107			
b. Teachers	7 145	7 141	7 361	7 548	7 225	7 436
Indices	100	100	103			
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	*	3 236	*	3 473		4 143
g. Percentage (f : b)		45.3		46.0		55.7
h. Qualified women teachers						
i. Percentage (h : f)						

UNITED KINGDOM
Table 19-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN PUBLIC GENERAL SECONDARY EDUCATION

Notes

1) Persons teaching on the day of the survey, including replacements but excluding vacant posts.

2) Full-time and the full-time equivalent of part-time teachers.

3) Including technical education.

4) Public and grant-aided sector, that is to say 94.3 per cent of the total school population at this level in 1967-68.

Sources

Education Statistics for the United Kingdom 1970, Table 7.

Supplementary Data

The pupil/teacher ratios are slightly better in the grant-aided sector than in the public sector. In 1969-70 in secondary education the ratio was 17.7 for the public sector and 16.1 for the grant-aided sector.

The percentage of graduate full-time teachers has tended slightly to decrease. In public secondary education it fell from 39.1 per cent to 38.5 per cent between 1965-66 and 1969-70; the percentage of full-time university graduate women teachers fell from 33.6 per cent to 33.5 per cent over the same period.

TABLE 19 - 11

PUPILS AND FULL-TIME(2) TEACHERS(1) IN GENERAL SECONDARY(3) EDUCATION, PUBLIC(4)

UNITED KINGDOM

School year beginning in :	1965	1966	1967	1968	1969	1970
Secondary education - first level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - second level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	3 306 481	3 333 067	3 412 269	3 497 568	3 593 315	
Indices	100	101	103	105	108	
b. Teachers	184 903	186 945	191 698	197 502	204 222	
Indices	100	101	104	106	110	
c. Pupil/teacher ratio (a : b)	17,9		17.8		17.6	
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers			82 656		89 601	
g. Percentage (f : b)			43,1		43.8	
h. Qualified women teachers						
i. Percentage (h : f)						

ENGLAND AND WALES
Table 20-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Full-time teachers and full-time equivalent of part-time teachers.

2) Before 1965-66; cf. Study on Teachers - United Kingdom, OECD, 1969, Part One - Annex III, Tables VII (a) and (b) and IX. The last available year is 1964-65.

3) In public education, it covers modern and comprehensive type secondary schools and unclassified schools other than technical schools. In private education, it covers private secondary schools (other than grant-aided grammar schools) and mixed primary and secondary schools.

4) The percentage of women is calculated from the number of full-time teachers only.

5) Public grammar schools and grant-aided grammar schools.

6) In private education, each part-time pupil is reckoned on the basis of half a year.

Sources

Statistics of Education 1966, 1967, 1968, 1969, Volume I, Table I.

Supplementary Data

The full-time equivalent of part-time teachers accounted for 6.7 per cent in 1970 compared with 7 per cent in 1965. In the first cycle of private education part-time teachers accounted for 13 per cent of the teaching load in 1970.

Between 1965 and 1969, the standard of qualifications of full-time teachers in primary and secondary public education remained at a fairly steady level. The percentages are as follows: qualified teachers (graduates from the university and teacher-training colleges and others whose training is not specified in the official statistics): 98.6 to 99 per cent (women 96.3 to 100 per cent); teachers with a university degree: 22.1 per cent to 22 per cent (women only, 13.3 per cent to 13.4 per cent); teachers trained in the teacher-training colleges: 85.8 per cent to 89.3 per cent (women 87.3 per cent to 90.5 per cent). Between 1965 and 1969, for men teachers in public secondary education there was a slight decrease in the relative value of the number of university graduates. For instance, for modern schools it fell from 18.1 per cent to 17.9 per cent; for grammar schools, from 79.5 per cent to 77.1 per cent; for comprehensive schools, from 46.3 per cent to 43.6 per cent; and for the total number of schools, from 30.7 per cent to 30 per cent. This trend is somewhat less marked in grant-aided grammar schools (private) where the percentage has dropped from 63.8 per cent to 63.6 per cent and where, for women, it has risen from 51.4 to 55.4 per cent.

Other Sources: Statistics of Education 1966 and 1970, Volume IV, Tables 18, 22, 23.

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TABLE 20 - 11

ENGLAND AND WALES

PUPILS AND FULL-TIME[1] TEACHERS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (2)	1966	1967	1968	1969	1970
Secondary education - first level[3]						
a. Pupils	2 249 126	2 338 835	2 434 764	2 524 444	2 611 446	2 725 748
Indices	100	104	108	112	116	121
b. Teachers	128 412	131 480	136 873	143 229	149 835	155 599
Indices	100	102	107	111	116	121
c. Pupil/teacher ratio (a : b)	17.5			17.6		17.5
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage[4]	39.5			38.2		41.9
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - second level[5]						
a. Pupils (6)	827 887	811 215	773 490	750 074	723 575	691 723
Indices	100	98	93	91	87	83
b. Teachers	49 105	48 403	46 558	45 397	44 096	41 616
Indices	100	99	95	92	89	85
c. Pupil/teacher ratio (a : b)	16.9			16.5		16.6
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (4)	38.5			38.3		42.3
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	3 077 013	3 150 050	3 208 254	3 274 518	3 335 521	3 417 471
Indices	100	102	104	106	108	111
b. Teachers	177 517	179 883	183 431	188 626	193 931	197 215
Indices	100	101	103	106	109	111
c. Pupil/teacher ratio (a : b)	17.3			17.4		17.3
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (4)	39.2			38.2		42.0
h. Qualified women teachers						
i. Percentage (h : f)						

SCOTLAND
Table 21-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN PUBLIC GENERAL SECONDARY EDUCATION

Notes

1) Full-time teachers and full-time equivalent of part-time teachers, excluding 1965 for which only figures for full-time certificated teachers amounting to 17,105 are available.

2) Comprehensive and selective schools.

3) Because of the lack of adequate data, the figures cover only the public and grant-aided sector, excluding independent and private institutions.

4) For the same year, see Study on Teachers - United Kingdom, OECD, 1969, Part Two,Scotland, Annex, Tables 4 and 5. The data for secondary school teachers are not comparable because the sources vary.

5) Certificated teachers. From 1st April, 1968 this procedure was replaced by registration. The percentage of qualified teachers is calculated on the number of full-time teachers only.

6) The percentage of women teachers is calculated on the number of full-time teachers only.

Sources

Scottish Educational Statistics 1966, 1967, 1968, 1969, Table 4.

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TABLE 21 - 1)

PUPILS AND FULL-TIME(1) TEACHERS IN GENERAL(2)
SECONDARY EDUCATION, PUBLIC(3)

SCOTLAND

School year beginning in :	1965 (4)	1966	1967	1968	1969	1970
Secondary education - first level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - second level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	283 592	288 054	295 625	307 185	317 027	327 514
Indices		100	102	106	111	115
b. Teachers		19 176	19 630	19 780	19 983	20 784
Indices		100	102	103	104	108
c. Pupil/teacher ratio (a : b)		15		15.5		15,8
d. Qualified teachers						
e. Percentage (5)		93,2		94,9		98,2
f. Women teachers						
g. Percentage (6)		40,9		41,1		42,4
h. Qualified women teachers						
i. Percentage (h : f)						

NORTHERN IRELAND
Table 22-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN PUBLIC GENERAL SECONDARY EDUCATION

Notes

1) Full-time teachers only: cf. details below on part-time teachers.
2) Public and grant-aided sector.
3) For the same year, see Studies on Teachers - United Kingdom, OECD, 1969, Part Three,Northern Ireland, Annex, Tables 4 and 5. Recent data are incomplete and there are no data on qualifications for 1967-68.
4) Secondary intermediate school.
5) The pupil/teacher ratio is calculated on the number of full-time teachers only.
6) Grammar schools.
7) Instead of 2,099 in the Study on Teachers, the difference probably being due to the fact that the source was different.

Sources

Northern Ireland, Education Statistics, No. 7, November, 1968, Tables 6 and 8. Retrospective data.

No. 13, December, 1971.

Supplementary Data

The figures for the full-time equivalent of part-time teachers for 1970-71 are available (the full-time equivalent is calculated by dividing the hours taught by part-time teachers by 4). In intermediate secondary education, the full-time equivalent of part-time teachers is 78. Accordingly, the real pupil/teacher ratio is 18.8. In Grammar Schools the full-time equivalent of part-time teachers is 117. The real pupil/teacher ratio is therefore 17.8 rising to 18.4 for secondary general education as a whole.

Almost all the teachers are qulified, that is certificated. In 1970-71, 53.5 per cent of secondary school teachers were university graduates and registered teachers. For women teachers the percentage was 47.4 per cent.

Other Sources: Northern Ireland-Education Statistics-No.7, November, 1968, Tables 5 and 54. No. 13, December, 1971, Tables 6 and 53.

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TABLE 22 - 11

NORTHERN IRELAND

PUPILS AND FULL-TIME(1) TEACHERS IN GENERAL SECONDARY EDUCATION, PUBLIC(2)

School year beginning in :	1965(3)	1966	1967	1968	1969	1970
Secondary education - first level(4)						
a. Pupils	63 690	67 950	74 118	77 676	80 876	84 543
Indices	100	107	116	122	127	133
b. Teachers	3 109	3 410	3 595	3 903	4 121	4 411
Indices	100	110	116	125	132	149
c. Pupil/teacher ratio (a : b)(5)	20.5			19.9		19.2
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	1 477		1 699			2 095
g. Percentage (f : b)	47.5		47.2			50.9
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - second level(6)						
a. Pupils	44 821	45 980	47 955	49 783	50 818	51 642
Indices	100	103	107	111	113	115
b. Teachers	2 299(7)	2 378	2 466	2 580	2 679	2 781
Indices	100	103	107	112	116	121
c. Pupil/teacher ratio (a : b)(5)	19.5			19.3		18.6
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	969		1 196			1 274
g. Percentage (f : b)	42.1		48.4			45.8
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	108 511	113 930	122 073	127 459	131 694	136 185
Indices	100	105	112	117	121	125
b. Teachers	5 408	5 788	6 061	6 483	6 800	7 192
Indices	100	107	112	119	125	133
c. Pupil/teacher ratio (a : b)(5)	20.1			19.6		18.9
d. Qualified teachers		5 739				
e. Percentage (d : b)		99.1				
f. Women teachers	2 446		2 895			3 369
g. Percentage (f : b)	45.2		47.7			46.8
h. Qualified women teachers						
i. Percentage (h : f)						

SWEDEN
Table 23-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN SECONDARY EDUCATION

Notes

1) The figures cover the total number of teachers, including those who are on full or part leave of absence and excluding headmasters.

2) That is, up to 1968 the 1st cycle (realskolan, Flickskolan and the upper classes of the comprehensive school) and the second cycle of general and technical education (old and new gymnasia and Fackskola). From 1968, teachers in the first cycle of vocational education (Yrkesskolan) are included with all secondary teachers. The corresponding figures for pupils have therefore also been grouped together.

3) For the years before 1965 cf. Study on Teachers - Sweden, OECD 1968 - Statistical Annex, Table on p. 114 and Table VIII. Since these tables were based on the results of a special enquiry carried out in Sweden for 1963 and 1964, it has not been possible to continue the series because the available data (Statistical Yearbook and the S.C.B. Green papers (U series) were not presented in the same way.

4) Absence of data on teachers because of the strike.

Sources

S.C.B. Green papers, series:

U 1967/20; U 1967/8; U 1967/26; U 1968/24;
U 1968/19; U 1970/8; U 1970/21; U 1972/12 (§ 3.3) and
U 1971/1.

Swedish Statistical Yearbook, 1970 and 1971.

TABLE 23 - 11

SWEDEN

PUPILS AND FULL-TIME(1) TEACHERS IN GENERAL SECONDARY EDUCATION(2)

School year beginning in :	1965 (3)	1966 (4)	1967	1968	1969	1970
Secondary education - first level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - second level						
a. Pupils	405 483	427 292	439 724			
Indices	100	105	108			
b. Teachers	41 744		46 292			
Indices	100		111			
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers	18 088		21 465			
g. Percentage (f : b)	43.3		46.4			
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	592 503	632 448	629 083	607 909	626 148	564 739
Indices	100	107	106	103	106	95
b. Teachers	55 606		60 235	52 749	53 774	55 367
Indices	100		108	95	97	99
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						

TURKEY
Table 25-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) The available figures do not show whether part-time teachers are included.

2) For the same year, cf. Study on Teachers - Turquie, OECD, 1969 - Statistical Data, Tables 4 and 5. The figures for general teachers are not fully comparable.

3) Established.

Sources

Table supplied by the State Institute of Statistics.

Educational Statistics 1970-71.

Supplementary Data

The proportion of women in the first and second cycle of general secondary education remains fairly stable. In the first cycle it fluctuates around 35 per cent and in the second cycle around 45 per cent. It is generally over 50 per cent in private education.

Other Sources: Turkish Statistical Yearbook 1968.

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TABLE 25 - II

TURKEY

PUPILS AND FULL-TIME[1] TEACHERS IN GENERAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (2)	1966	1967	1968	1969	1970
Secondary education - first level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - second level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	547 851	525 205	757 448	866 067	963 886	1 064 695
Indices	100	114	138	158	176	193
b. Teachers	20 777	23 411	20 095	24 573	23 611	32 437
Indices	100	113	97	118	114	156
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers (3)						22 950
e. Percentage (d : b)						70.7
f. Women teachers						12 120
g. Percentage (f : b)						37.3
h. Qualified women teachers (3)						9 851
i. Percentage (h : f)						81.2

YUGOSLAVIA
Table 26-II

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN PUBLIC GENERAL SECONDARY EDUCATION

Notes

1) The second cycle here covers the gymnasia, fine arts schools and teacher-training colleges (colleges for training primary, vocational and home economics teachers and those intended for teacher-training and physical education). Because these types of education are so varied, it has not been possible to calculate the pupil/teacher ratios.

2) For previous years, cf. Study on Teachers - Yugoslavia, OECD, 1968, Annex I, Tables VII and IX. The last available year is 1962-63.

3) The percentage of teachers is calculated from the total number of full-time and part-time teachers.

Sources

Yugoslav Statistical Yearbook 1970 and 1972.

Supplementary Data

There were 1,241 part-time teachers in 1965-66, and 1,058 in 1970-71. The figures for the full-time equivalent of these teachers, paid by the hour, are not available.

In the gymnasia the full-time pupil/teacher ratio was 22.5 in 1965-66 and 19.5 in 1970-71.

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TABLE 26 - 11

YUGOSLAVIA

PUPILS AND FULL-TIME TEACHERS IN GENERAL[1] SECONDARY EDUCATION, PUBLIC

School year beginning in :	1965[2]	1966	1967	1968	1969	1970
Secondary education - first level						
a. Pupils						
Indices						
b. Teachers						
Indices						
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (f : b)						
h. Qualified women teachers						
i. Percentage (h : f)						
Secondary education - second level						
a. Pupils	209 699	211 463	211 756	212 388	210 219	208 084
Indices	100	100	100	101	100	99
b. Teachers	10 083	10 569	11 002	11 322	13 260	11 516
Indices	100	105	109	112	131	114
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (3)	43,8			43,8		43,4
h. Qualified women teachers						
i. Percentage (h : f)						
TOTAL secondary education						
a. Pupils	209 699	211 463	211 756	212 388	210 219	208 084
Indices	100	100	100	101	100	99
b. Teachers	10 083	10 569	11 002	11 322	13 260	11 516
Indices	100	105	109	112	131	114
c. Pupil/teacher ratio (a : b)						
d. Qualified teachers						
e. Percentage (d : b)						
f. Women teachers						
g. Percentage (3)	43,8			43,8		43,4
h. Qualified women teachers						
i. Percentage (h : f)						

Series III

PUPILS AND TEACHERS (FULL-TIME AND PART-TIME) IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

N.B.: Tables 3-III (Belgium), 4-III (Canada), 5-III (Denmark), 7-III (United States), 17-III (Netherlands) and 24-III (Switzerland) are not given due to the absence of available data (see foreword).

GERMANY
Table 1-III

NUMBERS OF FULL-TIME AND PART-TIME TEACHERS AND PUPILS IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Full-time teachers and full-time equivalent of part-time teachers.

2) Full-time vocational schools (Berufsfachschulen).

3) The percentage of women teachers is calculated on the number of full-time teachers only (cf. Statistical Yearbook note below); statistics are not available for 1965.

4) Part-time vocational schools (Berufschulen).

5) Technical schools (Fachschulen) and higher technical schools (höhere Fachschulen); these cannot be separated after 1965.

6) Including part-time (cannot be separated).

Sources

"Study on Teachers - Germany",OECD, 1969, for the period before 1965, especially Table 6.

"Lehrerbestand und Lehrerbedarf - I (Schüler Klassenlehrer 1961 bis 1970".

Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland, November, 1971. Tables A 2.1 and A 4.1.

General Statistical Yearbook (Statistisches Jahrbuch für die Bundesrepublik Deutschland) 1970 and 1971.

Supplementary Data

In the Berufsfachschulen (full-time vocational schools) the average number of pupils per class is tending to decrease after a period of stability; it fell from 25 in 1965 to 24 in 1968 and remained stable againuntil 1970. In the same institutions in 1968, the theoretical percentage cover of requirements, on the basis of the mean values used since 1963 for estimating teacher requirements (cf. OECD Study, Table 5), was 90.2 per cent for classes and 80 per cent for teachers.

Between 1966 and 1968, the trend in the number of hours taught by part-time staff in the three types of institution was a follows:

1) Full time	100 to 142
2) Part time	100 to 104
3) Full time and part-time	100 to 113

In the Berufsfachschulen, the pupil/teacher ratio was 18.7 in 1965 and 17.0 in 1970.

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TABLE T - III

GERMANY

PUPILS AND TEACHERS, FULL TIME AND PART TIME(1)
IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965	1966	1967	1968	1969	1970
Full-time - Short courses(2)						
a. Full-time pupils	159 580	170 840	195 261	197 867	195 725	200 383
Indices	100	107	122	124	123	126
b. Part-time pupils	-	-	-	-	-	-
Indices						
c. Full-time teachers	8 560	9 607	10 648	11 472	11 630	11 782
Indices	100	112	124	134	136	138
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (3)	54.2		54.9		53.6	
f. Part-time teachers	-	-	-	-	-	-
Indices						
Part time - short courses(4)						
a. Full-time pupils	-	-	-	-	-	-
Indices						
b. Part-time pupils	1 787 734	1 754 393	1 784 068	1 758 849	1 635 864	1 603 663
Indices	100	98	99	98	92	90
c. Full-time teachers	26 904	27 762	27 957	28 076	27 900	28 072
Indices	100	103	103	104	104	104
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (3)	30		30		29	
f. Part-time teachers	-	-	-	-	-	-
Indices						
Technical education - long courses(5)						
a. Full-time pupils (6)	97 332	91 339	93 838	97 969	103 722	98 092
Indices	100	94	97	101	107	101
b. Part-time pupils	-	-	-	-	-	-
Indices						
c. Full-time teachers	7 531	7 272	7 482	7 638	7 729	6 876
Indices	100	96	99	101	103	91
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage(3)		38	40	40		
f. Part-time teachers	-	-	-		-	-
Indices						

AUSTRIA
Table 2-III

BEST COPY AVAILABLE

NUMBERS OF FULL-TIME AND PART-TIME TEACHERS AND PUPILS IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Apprenticeship. Pupils are part time. This type of training was not covered in the case study.

2) Full time and part time.

3) The figure concerns full-time and part-time women teachers. The percentage is calculated on the total teaching force.

4) This is vocational training at intermediate and secondary level, only the latter leading to higher education. Teachers in these two types of school cannot be distinguished (cf. Study on Teachers - Austria, OECD, 1968, p. 13). The statistics given here cover the following types of institution: vocational, secondary technical, commercial (Handelsakademien and Handelsschulen), and girls' vocational schools. From 1967-68 because of a change in the statistical return, the number of pupils recorded in the latter now represent (apparently) only 78 per cent of enrolments in this type of education. Accordingly, only the following schools are taken into consideration: Haushaltung, Hauswirtschaft, Vorschule für Familie und beruf wirtschaftliche Frauenberufe, höhere Lehranstalten für wirtschaftliche Frauenberufe. The following are excluded from the whole series: Lehranstalten für gehobene Sozialberuf and Fachschulen für Sozialarbeit. As from 1969, data for teachers are no longer supplied in the Statistical publication used.

5) For the same year cf. Study on Teachers - Austria, OECD, 1968, Annex II - Statistical Tables, Tables XI and XV. No explanation is given for the difference in the number of pupils.

Sources

Österreichische Schulstatistik from 1965-66 to 1970-71.

Supplementary Data

Full-time technical and vocational education. The percentage of women is increasing in the number of full-time teachers and decreasing in part-time teachers (39.4 in 1965 and 32.8 in 1968). But in the full-time and part-time teaching force as a whole, the percentage of women is increasing slightly (38.3 in 1965 and 39.3 in 1968).

TABLE 2 - III

AUSTRIA

BEST COPY AVAILABLE

PUPILS AND TEACHERS (FULL TIME AND PART TIME)
IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (5)	1966	1967	1968	1969	1970
Technical education (1)						
a. Full-time pupils	-	-	-	-	-	
Indices						
b. Part-time pupils	145 140	117 505	115 566	112 521	130 265	
Indices	100	80	79	77	88	
c. Full-time teachers	2 058	1 698	1 634	2 008	2 124	
Indices	100	82	79	97	103	
d. Qualified teachers (2)						
Percentage	100	100	100	100	100	
e. Women teachers (3)	686	607	565	577	599	
Percentage	17.8		17.6		28.2	
f. Part-time teachers	1 789	1 764	1 566	1 136	1 067	
Indices	100	98	87	63	59	
Technical education (4)						
a. Full-time pupils	44 144	50 871	52 952	56 056	59 632	65 658
Indices	100	115	120	127	135	140
b. Part-time pupils	-	-	-	-	-	-
Indices						
c. Full-time teachers	4 285	4 549	4 903	5 101		
Indices	100	106	114	119		
d. Qualified teachers (2)						
Percentage	100	100	100	100		
e. Women full-time teachers	1 625	1 918	2 030	2 104		
Percentage (e : c)	37.0			41.2		
f. Part-time teachers	1 243	1 612	1 623	1 587		
Indices	100	129	130	127		
TOTAL technical education						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						

SPAIN
Table 6-III

NUMBERS OF FULL-TIME AND PART-TIME TEACHERS AND PUPILS IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) For the same year, cf. Study on Teachers - Espagne, OECD, 1969 - Statistical Data, Tables 6 and 7.

2) Industrial vocational training (excluding military centres) and commercial schools (including students in the higher non-university vocational grade, who increased from 5,881 in 1965-66 to 6,263 in 1967-68).

3) In the absence of detailed information, full-time and part-time teachers.

4) All established teachers in the full-time and part-time teaching force are considered to be qualified.

5) Bachillerato tecnico.

Sources

Estadistica de la enseñanza media en España, for the reference years.

TABLE 6 - III

SPAIN

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PUPILS AND TEACHERS (FULL TIME AND PART TIME) IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (1)	1966	1967	1968	1969	1970
Technical education - Short courses (2)						
a. Full-time pupils	145 509	152 884	160 325	172 233	178 736	
Indices	100	105	110	118	123	
b. Part-time pupils						
Indices						
c. Teachers (3)	10 849	11 478	11 449	12 040	*	
Indices	100	106	106	110		
d. Qualified teachers (4)	3 642	3 907	3 885	*	*	
Percentage (d : c)	33,5		33,9			
e. Women teachers (3)	480	657	712	*	*	
Percentage (e : c)	4,4	5,7	6,2			
f. Part-time teachers	*	*	*	*	*	
Indices						
Technical education - long courses (5)						
a. Full-time pupils	49 796	55 221	40 052	32 230	22 262	
Indices	100	111	80	65	48	
b. Part-time pupils	-	-	-	-	-	
Indices						
c. Teachers (3)	5 313	5 465	4 750	*	*	
Indices	100	103	89			
d. Qualified teachers (4)	1 736	1 815	1 374	*	*	
Percentage (d : c)	32,6		28,9			
e. Women teachers (3)	2 692	2 579	2 278	*	*	
Percentage (e : c)	50,7		47,9			
f. Part-time teachers	*	*	*	*	*	
Indices						
TOTAL technical education						
a. Full-time pupils	195 305	208 105	200 377	204 463	200 998	
Indices	100	106	102	104	103	
b. Part-time pupils	-	-	-	-	-	
Indices						
c. Teachers (3)	16 162	16 943	16 198	*	*	
Indices	100	105	100			
d. Qualified Teachers (4)	5 378	5 722	5 259	*	*	
Percentage (d : c)	33,3		32,4			
e. Women teachers (3)	3 172	3 236	2 990	*	*	
Percentage (e : c)	19,6		18,4			
f. Part-time teachers	*	*	*	*	*	
Indices						

FINLAND
Table 8-III

NUMBERS OF FULL-TIME AND PART-TIME TEACHERS AND PUPILS IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Very incomplete data, but the number of part-time pupils (if any) must be very low, cf. Classification of Educational Systems, OECD, 1972.

2) In the absence of detailed information these are full-time and part-time teachers.

Sources

Yearbook of Nordic Statistics

1968 (Tables 126 and 128)
1969 (Tables 136 and 138)
1971 (Tables 146 and 148).

TABLE 8 - III

FINLAND

PUPILS AND TEACHERS (FULL TIME AND PART TIME)
IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965	1966	1967	1968	1969	1970
Technical education - short courses						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						
Technical education - long courses						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						
TOTAL technical education						
a. Full-time pupils	85 000		98 000	110 000	118 000	
Indices	100		115	129	138	
b. Part-time pupils (1)						
Indices						
c. Teachers (2)	7 777	8 452	8 800	9 200	9 841	
Indices	100	108	113	118	126	
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						

FRANCE
Table 9-III

NUMBERS OF FULL-TIME AND PART-TIME TEACHERS AND PUPILS IN PUBLIC TECHNICAL SECONDARY EDUCATION

Notes

1) Excluding teachers of physical education.

2) Colleges of technical education: there are two types of course, the traditional: three -year course and the two-year course, introduced in 1963.

3) For the years preceding 1965, cf. Study on Teachers - France, OECD, 1969 - Annex III, Tables XIII(a) and XV(a). The last available year is 1964-65.

4) Includes all teachers who are not "maîtres rectoraux" or on contract. This is an administrative criterion which tends to overestimate the real level of qualification: see details below.

5) Institutional return: therefore frequent double counting.

6) Included with long-cycle general education (see Table 9-II(b)).

Sources

Tableaux de l'Education nationale 1958-68.

Note d'information No. 43, ministère de l'Education nationale, Service central des statistiques et de la conjoncture: "Situation statistique du personnel enseignant de second degré public en 1968-69".

Supplementary Data

Continuation of Note 4. The level of qualification differs slightly according to the sector i.e. general and theoretical technical education or practical education. The percentage of qualified teachers varied as follows between 1965 and 1970: in general and theoretical technical education it increased from 65.3 per cent to 66.7 per cent (accounting respectively for 47.6 per cent and 53.8 per cent of the total teaching force of these institutions); in practical education it rose from 64.3 per cent to 67.0 per cent.

Over the same period the trend in the level of qualification by discipline was on the whole upward, especially in technical drawing :

Commerce	53.1 % in 1965 and 65.8 % in 1970
Humanities	62.0 % in 1965 and 57.8 % in 1970
Technical Drawing	78.4 % in 1965 and 80.1 % in 1970
Home Economics	69.6 % in 1965 and 70.0 % in 1970

The trend in the full-time pupil/full-time teachers ratio between 1965 and 1969 was as follows:

General and theoretical technical education: 31.4 and 24.4

Practical education: 28.6 and 28.8.

Other Sources: "Le personnel enseignant des établissements du second degré - Proportion d'auxiliaires" ministère de l'Education nationale. Documents No. 2514, 2515, 2516, 2517, 3615 and 4206.

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TABLE 9 - III

FRANCE

PUPILS AND TEACHERS[1] (FULL TIME AND PART TIME) IN TECHNICAL SECONDARY EDUCATION,[2] PUBLIC

School year beginning in :	1965[3]	1966	1967	1968	1969	1970
Technical education - short courses						
a. Full-time pupils	322 179	341 027	377 497	424 828	434 495	438 208
Indices	100	106	117	132	135	136
b. Part-time pupils	-	-	-	-	-	-
Indices						
c. Full-time teachers	21 490	22 952	24 620	28 511	32 402	34 386
Indices	100	107	115	133	151	160
d. Qualified full-time teachers[4]	13 988	14 718	*	16 391		22 890
Percentage (d : c)	65,1			57,5		66,5
e. Women full-time teachers	8 129	8 603	9 300	11 031	12 716	13 458
Percentage (e : c)	37,8		37,8		39,2	39,1
f. Part-time teachers[5]	714				2 085	
Indices	100				209	
Technical education - long courses[6]						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						
TOTAL technical education						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						

GREECE
Table 10-III

NUMBERS OF FULL-TIME TEACHERS AND PUPILS IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Note

1) Full-time equivalent of teaching hours:
   theoretical education 25 hours
   practical education 30 hours.

2) Figures for 1965 are note available. For previous years cf. Study on Teachers - Grèce OECD, 1968, Annex III, Tables XIII (b and d) and XV. The last available year is 1962-63.

3) Vocational Schools: Schools of fine art (Kalliteknikai) are excluded.

4) Three-year course.

5) Four-year course.

6) Full-time equivalent of hours taught to full-time pupils.

7) Full-time equivalent of hours taught to part-time pupils.

8) Technical schools (Teknikai).

Sources

Greek Educational Statistics, Sections on technical education, 1966, 1967, 1968 and 1969.

Supplementary Data

The teaching hours for women teachers are much lower in part-time education: in 1969-70

Vocational schools 10.9 per cent
Technical schools 2.1 per cent.

For full-time education, the pupil/teacher ratios are as follows in 1969-70 :

Vocational schools:	
theoretical education	49.7
practical education	110.0
Technical schools:	
theoretical education	34.1
practical education	60.2.

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TABLE 10 - (1) GREECE

PUPILS AND TEACHERS[1] (FULL TIME) IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965(2)	1966	1967	1968	1969	1970
Technical education - short courses[3]						
a. Full-time pupils(4)		7 485	6 947	7 822	10 953	
Indices		100	92	104	146	
b. Part-time pupils(5)		1 923	2 656	2 634	1 977	
Indices		100	138	136	102	
c. Full-time teachers(6)			298	328	319	
Indices			100	110	107	
d. Qualified full-time teachers			*	*	*	
Percentage (d : c)						
e. Women full-time teachers			110	127	157	
Percentage (e : c)			36.9		49.2	
f. Teachers (7)			82	82	78	
Indices			100	100	95	
Technical education - long courses[8]						
a. Full-time pupils		28 338	34 214	30 842	35 694	
Indices		100	120	109	126	
b. Part-time pupils		44 938	48 848	46 545	46 416	
Indices		100	108	103	103	
c. Full-time teachers(6)			1 426	1 406	1 604	
Indices			100	98	112	
d. Qualified full-time teachers			*	*	*	
Percentage (d : c)						
e. Women full-time teachers			560	126	158	
Percentage (e : c)			39.2		9.8	
f. Teachers (7)			1 033	1 115	1 079	
Indices			100	107	104	
TOTAL technical education						
a. Full-time pupils		35 823	41 161	38 664	46 647	
Indices		100	115	108	130	
b. Part-time pupils		46 861	51 504	49 179	48 393	
Indices		100	110	105	103	
c. Full-time teachers (6)			1 724	1 734	1 923	
Indices			100	100	111	
d. Qualified full-time teachers			*	*	*	
Percentage (d : c)						
e. Women full-time teachers			670	253	315	
Percentage (e : c)			38,8		16,3	
f. Teachers (7)			1 115	1 197	1 157	
Indices			100	107	103	

IRELAND
Table 11-III

NUMBERS OF FULL-TIME AND PART-TIME TEACHERS AND PUPILS IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Vocational education, namely vocational continuation and technical schools, excluding schools of agriculture and home economics.

2) For the same year, cf. Study on Teachers - Ireland, OECD, 1969 - Statistical Annex, Tables 5 and 8.

3) Full time and part time.

Sources

Statistical abstract of Ireland, 1968 and 1969.

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TABLE 11 - (1)

IRELAND

PUPILS AND TEACHERS (FULL TIME AND PART TIME) IN TECHNICAL SECONDARY EDUCATION,(1) PUBLIC AND PRIVATE

School year beginning in :	1965(2)	1966	1967	1968	1969	1970
Technical education - short courses						
a. Full-time pupils	37 520	100 573	148 430			
Indices						
b. Part-time pupils	68 272					
Indices						
c. Full-time teachers	2 340	2 786	2 859			
Indices	100	118	122			
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers	2 287	2 500	2 660			
Indices	100	109	116			
Technical education - long courses						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						
TOTAL technical education						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						

ICELAND
Table 12-III

NUMBERS OF FULL-TIME AND PART-TIME TEACHERS AND PUPILS IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Full time and part-time.

2) 1964/1965.

3) 1971/1972 for pupils.

Sources

Yearbook of Nordic Statistics, 1967, Table 118: 1969, Tables 136 and 138; 1971, Table 146; 1972, Tables 157 and 158.

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TABLE 12 - III

ICELAND

PUPILS AND TEACHERS (FULL TIME AND PART TIME) IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (2)	1966	1967	1968	1969	1970 (3)
Technical education - short courses						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						
Technical education - long courses						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						
TOTAL technical education						
a. Full-time pupils (1)	3 856	4 400				2 883
Indices	100	114				74
b. Part-time pupils						
Indices						
c. Full-time teachers (1)	962	1 109	1 082	1 121	1 299	1 362
Indices	100	115	112	116	135	141
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						

ITALY
Table 13-III

NUMBERS OF FULL-TIME AND PART-TIME TEACHERS AND PUPILS IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) For previous years cf. Study on Teachers - Italie, 1968, OECD, Annex II, Tables XIII (a, b, c, d) and XV (a, b). The last available year is 1963-1964.

2) Vocational institutes and technical schools (up to 1966), namely 98.8 per cent of short-cycle technical education, excluding art schools.

3) Technical institutes.

4) Total number of full-time teachers excluding those who do not have a specific qualification.

5) Practical education.

Sources

Annuario statistico dell'istruzione italiana 1965 to 1971.

Supplementary Data

The teacher/pupil ratio remained steady over the period. In 1968 it was as follows:

Vocational institutes	11.0
Technical institutes	13.1
Technical education as a whole	12.5

TABLE 13 - III

PUPILS AND TEACHERS (FULL TIME AND PART TIME)
IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965[1]	1966	1967	1968	1969	1970
Technical education - short courses[2]						
a. Full-time pupils	169 927	169 272	189 670	215 315	232 669	
Indices	100	100	112	127	136	
b. Part-time pupils	-	-	-	-	-	
Indices						
c. Full-time teachers	17 124	17 269	18 274	19 399	22 103	
Indices	100	101	107	113	129	
d. Qualified full-time teachers[4]	13 760	13 642	14 649	15 809	19 189	
Percentage (d : c)	80.3		80.1		86.8	
e. Women full-time teachers	7 100	7 209	7 621	8 082	*	
Percentage (e : c)	41.5		41.7	41.7		
f. Part-time teachers[5]	5 506	6 153	6 549	6 924	6 716	
Indices	100	111	118	125	121	
Technical education - long courses[3]						
a. Full-time pupils	561 790	603 893	609 084	618 825	642 553	
Indices	100	107	108	110	114	
b. Part-time pupils	-	-	-	-	-	
Indices						
c. Full-time teachers	42 245	44 792	45 856	46 839	50 959	
Indices	100	106	108	110	120	
d. Qualified full-time teachers[4]	39 377	39 594	43 158	43 851	48 882	
Percentage (d : c)	93.2		94.1		95.9	
e. Women full-time teachers	18 793	19 681	20 127	19 447	*	
Percentage (e : c)	44.5		43.8	41.3		
f. Part-time teachers[5]	4 791	4 939	5 227	4 857	4 653	
Indices	100	103	109	101	97	
TOTAL technical education						
a. Full-time pupils	731 717	773 165	798 754	834 140	875 222	
Indices	100	106	109	114	119	
b. Part-time pupils	-	-	-	-	-	
Indices						
c. Full-time teachers	59 369	62 061	64 130	66 238	73 062	
Indices	100	104	108	111	123	
d. Qualified full-time teachers[4]	53 137	53 236	57 807	59 660	68 071	
Percentage (d : c)	89.5		90.1		93.1	
e. Women full-time teachers	25 893	26 890	27 748	27 529	*	
Percentage (e : c)	43.6		43.2	41.4		
f. Part-time teachers[5]	10 297	11 092	11 776	11 781	11 369	
Indices	100	107	114	114	110	

JAPAN
Table 14-III

NUMBERS OF FULL-TIME AND PART-TIME TEACHERS AND PUPILS IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Part-time second cycle education. For full-time education cf. Table 14-II.

2) For the same year, cf. Study on Teachers - Japan, OECD, 1969 - Statistical Data, Tables 1 and 6.

3) Teachers and assistant teachers.

4) Full-time and part-time education cannot be separated.

Sources

Annual report of the Ministry of Education in Japan, 1965, 1966, 1967 and 1968-70.

Japan Statistical Yearbook, 1969.

Outline of Education in Japan, March, 1970; Agency for Cultural Affairs, Goverment of Japan.

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TABLE IV - 11

JAPAN

PUPILS AND TEACHERS (FULL TIME AND PART TIME)
IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (2)	1966	1967	1968	1969	1970 (4)
Technical education - short courses						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						
Technical education - long courses (1)						
a. Full-time pupils	-	-	-	-	-	-
Indices						
b. Part-time pupils	511 898	509 152	477 301	444 311	405 854	
Indices	100	99	93	86	79	
c. Full-time teachers	21 263	21 437	21 [illegible]	21 348	21 661	
Indices	100	100	101	101	102	
d. Qualified full-time teachers (3)	20 387	[illegible]	20 706	[illegible]	20 759	
Percentage (d : c)	95.8		95.3 (5)	..	95.7	
e. Women full-time teachers	2 373	2 371	2 462	2 626	2 732	
Percentage (e : c)	11.1		[illegible]		12.6	
f. Part-time teachers	6 486	6 271	6 107	5 861	6 102	
Indices	100	96	95	90	94	
TOTAL technical education						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						

LUXEMBOURG
Table 15-III

NUMBERS OF FULL-TIME AND PART-TIME PUPILS AND TEACHERS IN PUBLIC TECHNICAL SECONDARY EDUCATION

Notes

1) Absence of data on teachers in private education. Apparently in private education there is no equivalent to the public technical school.

2) Cf. Study on Teachers - Luxembourg, OECD, 1968, Annex I, Table XV. The last available year for pupils is 1966-67. Data are not comparable for vocational education.

3) Full-time and part-time pupils i.e. those in engineering schools, the Esch Alzette vocational schools and vocational centres (95 per cent of the total enrolments at this level).

4) All teachers other than student-teachers are considered to be qualified.

5) The percentage of women is calculted on the total number of full-time and part-time teachers.

6) Only one woman.

Sources

Courrier de l'Education nationale no. B 4/70 and B 5/70, and the same series for 1970-71.

TABLE 15 - 1(1)

LUXEMBOURG

PUPILS AND TEACHERS (FULL TIME AND PART TIME) IN TECHNICAL SECONDARY EDUCATION, PUBLIC(1)

School year beginning in :	1965	1966 (2)	1967	1968	1969	1970
Technical education - short courses						
a. Full-time pupils (3)	1 825	2 123	2 536	3 097	3 621	3 224
Indices	100	116	138	169	198	176
b. Part-time pupils	2 395	2 322	2 426	2 464	2 482	2 249
Indices	100	96	101	102	103	93
c. Full-time teachers				171	252	
Indices						
d. Qualified full-time teachers (4)				74	182	
Percentage (d : c)				43,3	72,2	
e. Women full-time teachers						
Percentage (5)				15,2	15,0	
f. Part-time teachers				171	224	
Indices						
Technical education - long courses						
a. Full-time pupils	297	286	282	301	252	247
Indices						
b. Part-time pupils	-	-	-	-	-	-
Indices						
c. Full-time teachers				25	26(6)	
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers				19	15	
Indices						
TOTAL technical education						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						

NORWAY
Table 16-III

NUMBERS OF FULL-TIME AND PART-TIME PUPILS AND TEACHERS IN TECHNICAL AND VOCATIONAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) For the same year cf. Study on Teachers - Norway, OECD, 1969, Statistical Data,Tables 3 and 4. The data are not comparable.

2) This comprises almost all technical and vocational education, including training colleges and training centres for specialised teachers. Certain commercial vocational training schools, home economics education, dental nursing schools and training for the hotel industry are apparently excluded. Generally speaking, this is full-time education.

3) Teachers with the necessary training: med laererutdanning.

Sources

Undervisning statistikk, statistisk sentralbyra, Oslo, for 1965, 1966, 1967.

Norwegian Statistical Yearbook from 1968.

Supplementary Data

The pupil/full-time teacher ratio has developed as follows:: 14.6 in 1965 and 13.6 in 1970. The ratio is remarkably low considering that there are more part-time teachers than full-time teachers.

The percentage of qualified women teachers was 79.3 in 1965 and 80.0 in 1970.

TABLE 16 - III NORWAY

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PUPILS AND TEACHERS (FULL TIME AND PART TIME)
IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965 (1)	1966	1967	1968	1969	1970
Technical education - short courses						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						
Technical education - long courses						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						
TOTAL technical education (2)						
a. Full-time pupils	72 916	75 663	78 914	82 111	84 952	89 899
Indices	100	104	108	113	117	123
b. Part-time pupils	-	-	-	-	-	-
Indices						
c. Full-time teachers	4 983	5 295	5 635	5 805	6 139	6 593
Indices	100	106	113	116	123	132
d. Qualified full-time teachers (3)	4 086	4 348	4 722	*	5 271	5 611
Percentage (d : c)	82,0		83,8		85,8	85,1
e. Women full-time teachers	1 157	1 257	1 372	1 439	1 572	1 736
Percentage (e : c)	23,2			24,7		26,3
f. Part-time teachers	5 292	5 636	5 876	6 057	6 081	6 593
Indices	100	106	111	114	114	126

PORTUGAL
Table 18-III

NUMBERS OF FULL-TIME AND PART-TIME TEACHERS AND PUPILS IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Commercial and engineering schools only.

2) 1964-65. For the same year cf. Study on Teachers - Portugal, OECD, 1968, Annex II, Tables XIII and XV. The numbers of teachers are recorded on a different basis and do not correspond since they also include teachers in agricultural education.

3) Full time and part time.

4) The sources used do not give any indication of a possible breakdown between full-time and part-time teachers. The figures shown probably include both categories.

5) Professores.

6) Private tuition is included in the figures for pupils, but only classroom teachers are recorded.

Sources

Estatistica da Educação 1964-65, 1967, 1969, 1970, 1971.

Annuario Estatistico 1968.

TABLE 18 - III

PORTUGAL

PUPILS AND TEACHERS (FULL TIME AND PART TIME) IN TECHNICAL SECONDARY EDUCATION,(1) PUBLIC AND PRIVATE

School year beginning in :	1965 (2)	1966	1967	1968	1969	1970
Technical education - public						
a. Full-time pupils	132 264	142 783	143 366	125 428	112 265	118 262
Indices	100	107	108	94	84	89
b. Part-time pupils	-	-	-	-	-	-
Indices						
c. Full-time teachers (4)	6 150	6 955	7 403	7 155	6 579	6 868
Indices	100	113	120	116	106	111
d. Qualified full-time teachers(5)	4 703	5 293	*	5 568	5 046	5 328
Percentage (d : c)	76.4			77.8		77.5
e. Women teachers	2 807	3 329	*	3 696	2 996	3 195
Percentage (e : c)	45.6			51.6		46.5
f. Part-time teachers	*	*	*	*	*	*
Indices						
Technical education - private						
a. Full-time pupils(3) (6)	8 065	9 189	9 282	9 197	6 845	7 128
Indices	100	113	115	114	84	88
b. Part-time pupils	*	*	*	*	*	*
Indices						
c. Full-time teachers(6)	345	398	406	350	244	227
Indices	100	115	117	101	70	65
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women teachers	102	119	*	118	75	81
Percentage (e : c)	29.5			33.7		38.8
f. Part-time teachers	*	*	*	*	*	*
Indices						
TOTAL technical education						
a. Full-time pupils (3)	140 329	151 972	153 175	134 625	119 110	125 390
Indices	100	108	109	95	84	89
b. Part-time pupils	*	*	*	*	*	*
Indices						
c. Full-time teachers (4)	6 495	7 353	7 809	7 505	6 823	7 095
Indices	100	113	120	115	105	109
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women teachers	2 909	3 448	*	3 551	3 071	3 276
Percentage (e : c)	44.7			47.3		46.1
f. Part-time teachers	*	*	*	*	*	*
Indices						

UNITED KINGDOM
Table 19-III (b)

PUPILS AND TEACHERS IN COLLEGES OF FURTHER EDUCATION (PUBLIC AND GRANT-AIDED SECTOR)

Notes

1) Colleges of Advanced Technology are excluded, since they are now integrated into the Universities.

2) Excluding about 185,000 (1967), 143,000 (1968), 149,000 (1969) and 205,000 (1970) students in Scotland and about 34,000,27,000, 28,000 and 30,600 respectively in Northern Ireland, for whom a breakdown by age is not available.

3) Full time.

Sources

Education statistics for the United Kingdom:
1967 and 1968, Tables 12 and 23; 1969, Tables 12 and 24;
1970, Tables 12 and 24.

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Table 19-III (b)

PUPILS AND TEACHERS IN COLLEGES OF FURTHER EDUCATION, (1)
PUBLIC AND GRANT-AIDED SECTOR

	School year beginning					
	1965	1966	1967	1968 (2)	1969 (2)	1970 (2)
PUPILS						
Total	3 088 000	3 270 000	3 374 111	3 332 180	3 278 156	3 371 427
Indices	100	105	109	107	106	109
Full time			213 158	231 696	246 743	253 395
Part time			3 160 953	3 100 484	3 031 413	3 118 032
Under 18			805 170	786 051	770 497	754 986
Full time			105 360	112 795	120 225	120 871
Part time			699 810	673 256	650 272	634 115
TEACHERS (3)						
a. Total	40 766	44 957	48 878	52 007	55 219	
indices	100	110	119	127	135	
b. Women	5 943	6 502	7 117	7 636	8 180	
Percentage (b:a)	14.5		14.5		14.8	
c. University graduates	14 335	15 600	16 881	17 889	19 120	
percentage (c:a)	35.2		34.5		34.6	
d. Women university Graduates	1 678	1 931	2 200	2 341	2 519	
Percentage (d:b)	28.2		30.9		30.7	

ENGLAND AND WALES
Table 20-III (a)

NUMBERS OF FULL-TIME AND PART-TIME TEACHERS AND PUPILS IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) Part-time pupils included, each counting as half a pupil.

2) Part-time teachers are converted into full-time equivalent.

3) Before 1965-66, cf. Study on Teachers - United Kingdom, OECD, 1969, Part One, Annex III, Table XV.
The last available year is 1964-65.

4) In public education, the technical secondary schools, and in private education, the technical schools and institutes (excluding pre-primary schools).

5) The percentage of women teachers is calculated on the number of full-time teachers only.

Sources

Statistics of Education 1966, 1967, 1968, 1969, 1970, 1971, Volume I, Table I.

Supplementary Data

Between 1965 and 1970 the average size of classes (as taught) has decreased in public education (21.7 to 20.8).

Despite a reduction in the teaching force, the teaching load of part-time teachers increased from 4.8 to 5.5 per cent between 1965 and 1970. This share was greater in public education (6.0 per cent in 1970) than in private education (1.5 per cent in 1970) and increased faster in public education from 4.9 to 6 per cent over the period.

As regards full-time teachers in public education, the number of university graduates remains steady. They accounted for 51.8 per cent in 1965 and 52.2 per cent in 1969. This percentage is tending to decrease slightly for men (from 54.5 to 53.9 per cent) and to increase slightly for women (44.4 to 47.7 per cent).

The pupil/teacher ratio was 16.6 in 1965 and 16.5 in 1970.

Other Sources: Statistics of Education 1969, Volume 4, Table 22.

TABLE 20 - I.1 (a)

ENGLAND AND WALES

PUPILS(1) AND TEACHERS (FULL TIME AND PART TIME)(2)
IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

School year beginning in :	1965(3)	1966	1967	1968	1969	1970
Technical education - short courses						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						
Technical education - long courses(4)						
a. Full-time pupils	74 985	71 026	63 239	57 699	44 757	38 481
Indices	100	95	84	77	59	51
b. Part-time pupils	-	-	-	-	-	-
Indices						
c. Full-time teachers	4 517	4 281	3 798	3 509	2 790	2 323
Indices	100	95	84	78	61	51
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (5)	28.6			26.7		28.4
f. Part-time teachers	-	-	-	-	-	-
Indices						
TOTAL technical education						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						

ENGLAND AND WALES
Table 20-III (b)

PUPILS AND TEACHERS IN COLLEGES OF FURTHER EDUCATION
(PUBLIC AND GRANT-AIDED SECTOR)

Notes

1) Excluding colleges of advanced technology.

2) Before 1965 cf. Study on Teachers - United Kingdom, OECD, 1969, Part One, Annex III, Tables XIII, XIV (c) (last available year 1964-1965) and XV (d) (last available year 1964-65).

3) Full time.

4) 8,527 teachers, including 1,839 women, received a vocational training in an institution other than a college of education.

5) Provisional data on teachers.

Sources

Statistics of Education:
1965, Volume 2, Tables 16 and 17;
1966, 1967, 1968, 1969 and 1970, Volume 3, Tables 3 and 5.

Statistics of Education:
1966, Volume 4, Tables 34 and 35;
1969, Volume 4, Tables 31 and 32;
1970, Volume 4, Tables 31 and 32.

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Table 20-III (b)

PUPILS AND TEACHERS IN COLLEGES OF FURTHER EDUCATION, (1)
PUBLIC AND GRANT-AIDED SECTOR

	School year beginning					
	1965 (2)	1966	1967	1968	1969 (5)	1970
PUPILS						
Total	2 915 592	3 091 022	3 193 700	3 144 901	3 082 555	3 181 241
Indices	100	106	109	107	105	109
Full time	169 832	181 748	197 035	214 273	227 685	237 812
Part time	2 745 760	2 909 290	2 996 665	2 930 628	2 854 870	2 943 429
Under 18	709 263	688 836	675 833	654 410	637 082	684 310
Full time	84 795	86 385	90 490	96 910	104 107	106 581
Part time	624 468	602 451	585 343	557 508	532 975	577 729
TEACHERS (3)						
a. Total	37 004	41 026	"	47 134	49 590	
indices	100	110		127	134	
b. Women	5 259	5 781	"	6 708	7 162	
Percentage (b:a)	14.2			14.2	14.4	
c. University graduates	12 814	13 945	"	16 215	16 894	
Percentage (c:a)	34.6			34.4	34.0	
d. Women	1 401	1 619	"	2 066	2 180	
Percentage (d:b)	26.4			30.7	30.4	
e. College of education graduates	4 435	"	"	6 466	7 231	
Percentage (e:a)	11.9			13.7	14.5	
f. Women	561			811	801	
Percentage (f:b)	10.6			12.0	11.1	

SCOTLAND
Table 21-III (b)

PUPILS AND TEACHERS IN COLLEGES OF FURTHER EDUCATION (PUBLIC AND GRANT-AIDED SECTOR)

Notes

1) The whole of the grant-aided sector, including advanced courses.

2) For the same year cf. Study on Teachers - United Kingdom, Part Two, OECD, 1969, Annex, Tables 6 and 7. The data are not comparable since all further education has been included here (Note 1).

3) Provisional data.

4) Full time.

5) Certificated teachers (Scottish legislation) or, after 1968, registered teachers.

Sources

Scottish Educational Statistics 1969, Tables 19 and 48, and 1971, Tables 22 and 57.

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Table 21-III (b)

PUPILS AND TEACHERS IN COLLEGES OF FURTHER EDUCATION, (1)
PUBLIC AND GRANT-AIDED SECTOR

	School year beginning					
	1965 (2)	1966	1967	1968	1969	1970 (3)
PUPILS						
Total	151 487	155 548	157 128	161 300	170 462	162 377
Indices	100	102	103	106	112	107
Full time	17 709	18 523	20 741	22 873	24 728	25 426
Part time	133 778	137 025	136 387	138 427	145 737	136 951
Under 18	61 781	60 620	57 395	57 635	59 425	57 048
Full time	9 167	8 906	9 208	10 052	9 868	9 178
Part time	52 614	51 714	48 187	47 583	49 557	47 870
TEACHERS (4)						
a. Qualified (5)	2 278	2 893	3 154	3 426	3 733	4 179
b. Women	606	725	756	777	812	877
Percentage (b : a)	26.6			22.6		20.9
c. University graduates	"	1 381	1 422	1 638	1 747	1 919
Percentage (c : a)		47.7		47.8		45.9
d. Women graduates	"	301	296	323	332	366
Percentage (d : b)		41.5		41.5		41.7
e. Unqualified	"	"	"	1 671	1 687	1 728
Total				5 097	5 420	5 907

NORTHERN IRELAND
Table 22-III (a)

NUMBERS OF FULL-TIME AND PART-TIME TEACHERS AND PUPILS IN PUBLIC TECHNICAL SECONDARY EDUCATION(1)

Notes

1) Public and grant-aided education.

2) Technical intermediate.

3) Full-time teachers and full-time equivalent of part-time teachers (each part-time teacher being counted as the quarter of a full-time teacher).

4) For the same year, cf. Study on Teachers - Northern Ireland, Annex, Table 5.

Sources

Education Statistics Nos. 3, 5, 7, 9, 11 and 13.

Supplementary Data

The trend in the pupil/teacher ratio is as follows:

1966 : 20.0
1967 : 21.9
1969 : 18.1.

TABLE 22 - III(a)

NORTHERN IRELAND

PUPILS AND TEACHERS (FULL TIME AND PART TIME)
IN TECHNICAL SECONDARY EDUCATION, PUBLIC(1)

School year beginning in :	1965(4)	1966	1967	1968	1969	1970
Technical education - short courses(2)						
a. Full-time pupils	3 301	2 825	2 384	1 745	905	484
Indices	100	85	72	52	27	14
b. Part-time pupils	-	-	-	-	-	-
Indices						
c. Full-time teachers(3)	165	129	103	99	50	*
Indices	100	78	62	60	30	
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers			24			
Percentage (e : c)			23,3			
f. Part-time teachers	-	-	-			
Indices						
Technical education - long courses						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						
TOTAL technical education						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						

NORTHERN IRELAND
Table 22-III (b)

PUPILS AND TEACHERS IN COLLEGES OF FURTHER EDUCATION
(PUBLIC AND GRANT-AIDED SECTOR)

Notes

1) For the same year, cf. Study on Teachers - United Kingdom, Part Three, OECD, 1969, Annex, Tables 5 and 6. The data differ too much to be recorded here.

2) Including pupils taking courses of advanced technology: 24.78 in 1966 and 12.63 in 1967.

3) Sandwich courses, other full-time courses, short full-time courses and release courses.

4) Including full-time equivalent of part-time teachers serving simultaneously in technical secondary education (technical intermediate); each teacher is counted as one-quarter of a full-time teacher.

Sources

Education Statistics Nos. 4, 6, 8, 10 and 12.

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Table 22-III (b)

PUPILS AND TEACHERS IN COLLEGES OF FURTHER EDUCATION; PUBLIC AND GRANT-AIDED SECTOR

	School year beginning					
	1965 (1)	1966	1967	1968	1969	1970
PUPILS						
Total (2)		31 600	32 364	34 496	34 724	36 914
Indices		100	102	109	110	116
Full time (3)		9 648	10 182	11 34[illegible]	11 748	11 695
Part time		21 952	22 182	23 151	22 976	25 219
Under 18		15 500	15 452	15 780	16 124	16 464
Indices		100	99	101	104	106
Full time		7 006	8 236	8 799	9 060	8 830
Part time		8 494	7 216	6 981	7 064	7 634
TEACHERS						
a. Full time (4)		1 089	1 177	1 232	1 256	1 332
indices		100	108	113	115	122
b. Women (b:a)		325	353	358	341	379
Percentage		29.8	29.9	29.0	27.1	28.4
c. Part time		1 684	1 451	1 569	1 401	1 730
indices		100	86	93	83	102
d. Women		495	435	482	430	604
Percentage		29.3	29.9	30.7	30.6	34.9

SWEDEN
Table 23-III

NUMBERS OF FULL-TIME AND PART-TIME TEACHERS AND PUPILS IN PUBLIC SECONDARY EDUCATION

Notes

1) These are the Yrkesskolan. Data are available only up to 1968.

2) The figures include teachers with teaching posts and those without (working less than half-time), accounting for 62.5 per cent of the total in 1965.

3) For this year cf. Study on Teachers - Sweden, OECD, 1968 - Statistical Annex, Table XIV and SCB-U 1967/68.

Sources

Statistisk årsbok 1970, Table 345.

Document SCB, series U. 1967/8, 1967/26 and 1968/19.

TABLE 23 - III

SWEDEN

PUPILS AND TEACHERS (FULL TIME AND PART TIME)
IN TECHNICAL SECONDARY EDUCATION, PUBLIC

School year beginning in :	1965 (3)	1966	1967	1968	1969	1970
Technical education - short courses (1)						
a. Full-time pupils	187 020	165 156	189 359			
Indices	100	88	101			
b. Part-time pupils	-	-	-			
Indices						
c. Full-time teachers (2)	13 862	13 928	13 943			
Indices	100	100	101			
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers	*	*	*			
Indices						
Technical education - long courses						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						
TOTAL technical education						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						

TURKEY
Table 25-III

NUMBERS OF FULL-TIME AND PART-TIME TEACHERS AND PUPILS IN TECHNICAL AND VOCATIONAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

Notes

1) For the same year cf. Study on Teachers - Turquie, OECD, 1969 - Statistical data, Tables 7a and 8. Data could not be linked up exactly.

2) Boys' and girls' technical schools, schools of commerce and tourism, schools of health and agriculture. Teacher training colleges are excluded.

3) Full time and part time.

4) Established.

Sources

Turkish Statistical Yearbook 1968 (retrospective), Tables 78, 79, 80, 81 and 83.

Educational Statistics 1970-71.

TABLE 25 - III

TURKEY

PUPILS AND TEACHERS (FULL TIME AND PART TIME)
IN TECHNICAL SECONDARY EDUCATION, PUBLIC AND PRIVATE

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School year beginning in :	1965 (1)	1966	1967	1968	1969	1970
Technical education - short courses						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						
Technical education - long courses						
a. Full-time pupils (3)						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						
TOTAL technical education (2)						
a. Full-time pupils (3)	112 374	122 311	114 986			416 924
Indices	100	109	102			371
b. Part-time pupils	*	*	*			*
Indices						
c. Full-time teachers (3)	8 059	8 508	9 513			26 876
Indices	100	106	118			333
d. Qualified full-time teachers (4)						19 615
Percentage (d : c)						72,9
e. Women full-time teachers (3)	3 249	3 468	3 709			8 674
Percentage (e : c)	40,3		40,0			32,3
f. Part-time teachers	*	*	*			*
Indices						

YUGOSLAVIA
Table 26-III

NUMBERS OF FULL-TIME AND PART-TIME TEACHERS AND PUPILS IN PUBLIC TECHNICAL SECONDARY EDUCATION

Notes

1) For the years before 1965-66, cf. Study on Teachers - Yugoslavia, OECD, 1968, Annex I, Tables XIII, XIV and XV. The last available year is 1962-63. As regards teachers, the two series are not comparable.

2) Schools for training skilled workers only (3 years), full-time and part-time. Schools of apprenticeship and schools of practical education are excluded.

3) Full time and part time.

4) The percentage of women teachers is calculted on total full-time and part-time teachers.

5) Technical secondary schools and other business and administrative schools (4 years), full time.

Sources

Yugoslav Statistical Yearbook, 1970 and 1972.

Supplementary Data

The decline in the number of part-time teachers is 54 per cent for technical education as a whole.

TABLE 26 - (1)

YOUGOSLAVIA

PUPILS AND TEACHERS (FULL TIME AND PART TIME)
IN TECHNICAL SECONDARY EDUCATION, PUBLIC

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School year beginning in :	1965 (1)	1966	1967	1968	1969	1970
Technical education - short courses (2)						
a. Full-time pupils (3)	199 301	216 979	234 044	258 114	275 177	286 008
Indices	100	109	117	129	138	143
b. Part-time pupils	*	*	*	*	*	*
Indices						
c. Full-time teachers	3 864	4 120	4 363	4 733	4 784	4 763
Indices	100	106	112	122	123	123
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (4)	20.2			23.2		25.6
f. Part-time teachers	1 489	1 435	1 342	853	1 144	1 063
Indices	100	96	90	57	76	71
Technical education - long courses (5)						
a. Full-time pupils	199 362	196 401	192 337	185 936	186 742	191 331
Indices	100	98	96	93	93	96
b. Part-time pupils						
Indices						
c. Full-time teachers	7 200	7 000	7 028	6 535	5 835	5 483
Indices	100	97	97	90	81	76
d. Qualified full-time teachers	-	-	-	-	-	-
Percentage (d : c)						
e. Women full-time teachers						
Percentage (4)	40.3			44.3		44.7
f. Part-time teachers	2 224	2 335	2 149	1 381	1 752	1 749
Indices	100	104	96	62	78	78
TOTAL technical education						
a. Full-time pupils						
Indices						
b. Part-time pupils						
Indices						
c. Full-time teachers						
Indices						
d. Qualified full-time teachers						
Percentage (d : c)						
e. Women full-time teachers						
Percentage (e : c)						
f. Part-time teachers						
Indices						

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